A study to assess the level of stress and coping behaviours and to evaluate the effectiveness of selected coping strategies among Student Nurses in selected institutions of Tamil Nadu.

A Thesis

Submitted to The Tamil Nadu Dr. M.G.R Medical University, Chennai,

for the award of the Degree of

Doctor of Philosophy

in Nursing

By

JANCY RACHEL DAISY, R, R.N., R.M., M.Sc(N).,

Professor

CSI Jeyaraj Annapackiam College of Nursing

Madurai

Under the Guidance of

PROF. DR.A. CHARLES STEPHEN RAJASINGH, M.S., M.Ch.,

Research Guide

C.S.I Jeyaraj Annapackiam College of Nursing

Madurai

2012

A study to assess the level of stress and coping behaviours and to evaluate the effectiveness of selected coping strategies among Student Nurses in selected institutions of Tamil Nadu.

Signature of the Guide: _____

PROF. DR.A. CHARLES STEPHEN RAJASINGH, M.S.,M.Ch.,
RESEARCH GUIDE
C.S.I JEYARAJ ANNAPACKIAM COLLEGE OF NURSING
MADURAI

Signature of the Co- Guide: _____

PROF. K. HELEN RANI
RESEARCH CO- GUIDE
C.S.I JEYARAJ ANNAPACKIAM COLLEGE OF NURSING
MADURAI

A Thesis

Submitted to The Tamil Nadu Dr. M.G.R Medical University, Chennai,
for the award of the Degree of
Doctor of Philosophy
in Nursing

DECEMBER 2012

CERTIFICATE BY GUIDE

This is to certify that the thesis entitled "**A study to assess the level of stress and coping behaviours and to evaluate the effectiveness of selected coping strategies among Student Nurses in selected institutions of Tamil Nadu",** submitted by **Mrs.JANCY RACHEL DAISY. R**, who registered for Ph.D in 2009 is a bonafide record of the research done by her during the period of study under my supervision and guidance and that it is not formed on any basis for the award of any other Degree, or Diploma, Associateship, Fellowship or any other similar title or any other Universities.

I also certify that this thesis is her original independent work. I recommend this thesis should be placed before the examiners for the award of Ph. D degree.

PROF. DR.A. CHARLES STEPHEN RAJASINGH M.S., M.Ch.,
RESEARCH GUIDE
C.S.I JEYARAJ ANNAPACKIAM COLLEGE OF NURSING
MADURAI

DECLARATION BY THE CANDIDATE

I hereby declare that this thesis entitled "**A study to assess the level of stress and coping behaviours and to evaluate the effectiveness of selected coping strategies among Student Nurses in selected institutions of Tamil Nadu"**, is an original work done by me under the guidance of **Prof.Dr.A.Charles Stephen Rajasingh M.S., M.Ch.,** and has not been submitted elsewhere, either partially or fully for the award of any other Degree, or Diploma, Associateship, Fellowship or any other similar title.

Mrs.JANCY RACHEL DAISY. R, M.Sc (N)., R.N., R.M.,
Professor
CSI Jeyaraj Annapackiam College of Nursing
Madurai

A study to assess the level of stress and coping behaviours and to evaluate the effectiveness of selected coping strategies among Student Nurses in selected institutions of Tamil Nadu

Research Guide : ----------

Prof. Dr.A. Charles Stephen Rajasingh M.S.,M.ch.,
Research guide
C.S.I Jeyaraj Annapackiam College of Nursing
Madurai

A THESIS SUBMITTED TO THE TAMILNADU DR. M.G.R MEDICAL UNIVERSITY, CHENNAI, INDIA, FOR THE DEGREE OF DOCTOR OF PHILOSOPHY IN NURSING

January 2009- December 2012

ACKNOWLEDGEMENT

I CALL TO GOD MOST HIGH, TO GOD TO SUPPLIES MY EVERY NEED.

Psalm 57:2

Gratitude can never be expressed in words but this is only a deep perception which makes the words flow from one's inner part.

I wish to express my sincere appreciation to those who have contributed to this thesis and supported me in one way or the other during this amazing journey

It is my privilege to express the deepest sense of gratitude **Prof. Dr. C. Jothi Sophia, M.Sc (N)., Ph.D.,** Principal, C.S.I. Jeyaraj Annapackiam College of Nursing for giving me the opportunity to carry out my doctoral research. It would have been impossible for me to start my study without her concerned approach when I contacted her for starting my doctoral programme. I would like to thank her for encouraging my research and for allowing me to grow in this profession.

I express my deep sense of gratitude to my Research Guide **Prof.Dr.A.Charles Stephen** who is an inspiration to initiate my research work. I was privileged to do this research work under her guidance and supervision and without her support this would not have been possible.

I am highly indebted to my Co-Guide **Prof.K.Helen Rani**, **M.Sc.,** (N) Professor in Nursing for her support, suggestions, encouragement and for her input in various

aspects of the study.

I would especially like to thank **Prof.Merlin Jeyapal, M.Sc., (N),** Vice-Principal, C.S.I. Jeyaraj Annapackiam College of Nursing for her support in research as well as my career.

It is my duty to express my sincere thanks to **Prof. Dr. Rajalakshmi, M.Sc(N).,Ph.D.,** Research Co-ordinator , for providing me research knowledge.

I would like to thank **Dr. Gabriel Jeyachandran, Ph.D.,** Director CSI College of Education, for his valuable suggestions rendered through out my study.

My heartfelt thanks goes to the panel of experts in various fields for giving their expertise opinions in this study.

My heartfelt thanks goes to **all principals** for granting permission and being supportive to conduct the study.

I would also like to thank my statistician **Mr.Mani Vel, M.Phil,** Statistician for his guidance and help rendered during analysis of this study.

I sincerely thank **Mr. Jeevan David,** MA., M.Ed., PGDCA., CSI College of Education, Pasumalai, for editing the manuscript

My special thanks goes to **Mrs.Angeline**, Librarian for her assistance in getting literatures related to my study.

I would like to acknowledge the most important person in my life – my Husband **Mr.Vincent Packiaraj**. He has been a constant source of strength and inspiration. There were times during the past four years when everything seemed hopeless and I didn't have any hope. I can honestly say that it was only his determination and constant encouragement that ultimately made it possible for me to see this thesis through to the end. I express my deepest sense of love and acknowledgement to my daughters **Vincy** and **Jessica** for their extended assistance, cooperation, encouragement and tolerance during my study period

Words cannot express the feelings I have for my father **Mr.Ratnamani**, Ex-Service Man who sacrificed himself not only for the country but also for the

family by providing constant unconditional support - both emotionally and financially.

I am indepted to my beloved mother **Mrs.Emimah** who illuminates our whole family by her prayers, love, concern and patience.

Also, I thank my in-laws **Mr.Soundarapandian** and **Mrs.Freeda** for providing me with unending encouragement and support.

I am thankful to my sisters and their family for their support and prayers especially my youngest one **Mrs.Beulah** and her kids for cheering me up in all my activities.

I would really thank **Laser Point** for the computer assistance which helped me to bring out this manuscript.

I add a special note of thanks to **Mrs.Jaya Thanga selvi** and **Mrs.Shyla Kamala Kumari, Ph.D., Scholars** for their assistance and motivation which helped me to bring out this thesis.

I wish to thank my friends **Mrs. Shanthi** and **Mrs.Therase** who have kept me constantly motivated and for their support.

I acknowledge my indebtedness to all my **study subjects** for their co-operation.

Finally again I thank my God, my good Father, for letting me through all the difficulties. I have experienced his guidance day by day. You are the one who let me finish my degree. I will keep on trusting You for my future. Thank you, Lord.

ABSTRACT

A study to assess the level of stress and coping behaviours and to evaluate the effectiveness of selected coping strategies among Student Nurses in selected institutions of Tamil Nadu.

INTRODUCTION

Stress affects the mind, body, and behaviour in many ways, and every one experiences stress differently. Long time stress among student nurses or prolonged stress can cause memory problems and inability to concentrate in the studies. Top five major sources of stress were detected among nursing college students: change in sleeping habits, vacations, breaks, and change in eating habits, increased work load, and new responsibilities. Furthermore, stress may result from being separated from home for the first time, the transition from a personal to an impersonal academic environment, and the structure of the academic experience at the college level.[68] Practice stress management techniques can help prevent professional burnout. Research has also shown that participants who practice stress management reap many personal benefits. Shapiro (2000) performed a meta-analysis study of stress management programs in medical schools and reported medical trainees participating in stress-management programs demonstrated: (1) improved immunologic functioning; (2) decreases in depression and anxiety; (3) increased spirituality and empathy; (4) enhanced knowledge of alternative therapies for future referrals; (5)improved knowledge of the effects of stress; (6) greater use of positive coping skills; and (7) the ability to resolve role conflicts[76]. Researchers have concluded that orientation to stress management is needed to freshers to cope with stressors is needed in their initial period itself.

The study undertaken was **"**A study to assess the level of stress and coping behaviours and to evaluate the effectiveness of selected coping strategies among Student Nurses in selected institutions of Tamil Nadu.

AIM AND OBJECTIVES:

The present study is aimed to evaluate the effectiveness of coping strategies on the level of stress and coping behaviours among student nurses. The objectives of this study were to: (1) Determine the effectiveness of coping strategies on the level of stress and coping behaviours among student nurses (2) Correlate the stress and coping behaviours of student nurses. The adapted conceptual framework in this study was based on Imogene King's Goal attainment Model (1981).

METHODS:

The study used a quasi- experimental study of before and after control group design. A total of 245 I year B.Sc. nursing degree students from six nursing institutions were included as interventional group (n=126) and control group (n=119) through purposive sampling technique. The teaching on coping strategies was given for 1 week and review for another 3 weeks. On the first week of data collection, following the pre- assessment, a detailed lecture was given on stress and coping strategies for seven consecutive days to the interventional group. Followed by this, first post test assessment was done on the seventh day to both the groups and reviewed for another 3 consecutive weeks and second posttest assessment was also done followingly to both the groups. Data collection tools included a (1) demographic variables,(2) 5- Point Likert scale on stress (3) 5- Point Likert scale on coping behaviours of student nurses. (4) Teaching module on "stress and coping strategies".

RESULTS:

The scores of stress and coping behaviours were compared between the two groups by unpaired 't' test. The findings revealed a significant difference between control 2nd - post and interventional 1st, 2nd post-test stress scores with the obtained overall 't' value 13.66 was greater than statistical table value and 'p' value was 0.000 at $P < 0.001$ level and a significant difference between control 2nd - post and interventional 1st, 2ndpost-test coping behaviours with the obtained overall 't' value 7.99 which was greater than statistical table value and 'P' value was 0.000 at $P < 0.001$ level Thus, it infers that the interventional group had higher score as compared to the control group. These findings proved that there is a significant decrease in the level of stress and increase in the level of coping behaviours among students in the interventional group than the control group. With regard to post- test correlation score, a negative correlation was present between the two variables. The result shows that the obtained coefficient correlation value in the control ($r = -0.374$) and the interventional($r = 0.372$) group indicate that there was a negative correlation between stress and coping, since the value was statistically significant at $P < 0.001$ level.

This study concluded that coping strategies might be an effective intervention in reducing stress and improving coping behaviours among student nurses in day today activities

RECOMMENDATIONS

The study recommended the following: (1) As for the result of this study, it is recommended that the coping strategies can be imparted to student nurses in their initial period of joining their course so as to lead a healthy and productive life.

TABLE OF CONTENTS

LIST OF APPENDICES

LIST OF TABLES

LIST OF FIGURES

CHAPTER - I
INTRODUCTION

Give wings for your stress and let it fly away

- Terri guillemet

1.Background of the study

Stress, first coined in the 1930's, has in more recent decades become a commonplace of popular parlance. Stress could be defined simply as the rate of wear and tear on the body systems caused by life.[1] It occurs when a person has difficulty in dealing with life situations, problems and goals.[2]Stress has physical, emotional, and cognitive effects. Although everybody has the capacity to adapt himself to stress, not everyone responds to similar stressors exactly the same.[3]

The word stress is derived from the Latin word "stringi", which means, "to bedrawn tight". Stress can be defined as any factor that threatens the health of the body or has an adverse effect on its functioning, such as injury, disease, or worry. According to Randy and David, "Stress is the subjective feeling produced by events that are uncontrollable or threatening." Constant stress brings about changes in the balance of hormones in the body which may lead to the situation or thought that makes us feel frustrated, angry, nervous, or anxious.[59]

"Newman[4]defined Stress, as the relationship between the person and the environment that is appraised by the person as taxing or exceeding the person's resources. Stressors are disruptive forces operating exposed to, through a stimulus or stressor. Stress is also the appraisal or perception of a stressor.

Stress is a natural phenomenon that everyone experiences in his or her life time[46]and is caused by stress causing factors or stressors[47]Constant stress brings

about changes in the balance of hormones in the body which may lead to the situation or thought that makes us feel frustrated, angry, nervous, or anxious.[47]

Seward [74]acknowledges that there are three types of stress: eustress,neutress and distress. Eustress is the first type that is experienced by people as motivating or inspiring, such as the stress that accompanies getting married. Neustress is considered neither good nor bad. Distress is the most common and identifiable type that is considered bad. People experience stress as either being acute, which is generally abbreviated, or chronic which continues over a prolonged period of time.

Stress is a part of everyone's life. Stress for short periods may not affect you but stress over time may cause or make some illness worse, such as heart diseases, stroke, high blood pressures, diabetes, irritable bowel syndrome, asthma, arthritis. Other common disorders linked to psychological state are eating disorders, tension headaches, migraines, muscle spasms, chest pains, excessive menstrual cramps, acne, rapid or irregular heart rate, intestinal ulcers, frequent urination and rheumatoid arthritis flare ups. Mental health problems – depression and anxiety may be the result of chronic stress.[48]

Nature of stress

1. Stress is inevitable
2. Stress can be positive as well as negative
3. Stress can be harmful to health
4. We can prevent, control and cope up with stress

Negativeeffectsofstress

1. Promotingnegativethinking
2. Damagingself- confidence

3. Narrowing attention

4. Pre-occupation

5. Consumesmentalenergy

6. Generatesunpleasantemotion

7. Bring about Interpersonalproblem

8.Manyofourbadhabitsandillnessareduetothe effect ofstress

Positiveeffects

1.Stressisasourceofenergy

2.Preparesthebodytomeetchallenges[63]

Stress brings advantages and disadvantages to us, it depends on how student nurses going to look upon them and take over them. Stresses can cause them to become stressful, feel distress and emotional affected while on the other hand,stresses give motivation and evoke them to be more upholding and persistent in the study in order to reach the optimum target and achieve fur ther success. As the eustress is good for them ,distress is a disadvantage for them. Stress affects the mind, body, and behaviour in many ways, and everyone experiences stress differently. Long time of stress in nursing student or prolonged stress can cause memory problems and unable to concentrate in the studies, sometimes they will feel chest pain, rapid hear tbeat, depression or general unhappiness and sleeping too much or too little whenever there is something goes wrong and may even lead to burnout[64]

According to Frassrand,[62]excessive stress can be harmful to a student's academic performance and students who perceive their stress levels as very high may often become depressed. This depression can lead to mental health problems, such as excessive corrupted interpersonal relationships.

Most of the student nurses are usually in the stage of late adolescents. Hence the problems faced by the adolescent population will be present among student nurses too. If asked a college student as to what makes college life stressful? One will receive a long list of situations including taking exams, preparing for term papers, lab reports, applying for loans, new friends, more demands on time and mind.[50]

Stress affects the mind, body, and behaviour in many ways, and every one experiences stress differently. Long time stress among student nurses or prolonged stress can cause memory problems and inability to concentrate in the studies. Sometimes they feel chest pain, rapid heartbeat, depression or general unhappiness and sleeping too much or too little or whenever something goes wrong. It may even lead to burnout. Clinical practicehas been identified as one of the most anxiety producing components in nursing programs. Lack of experience, fear of making mistakes, difficult patients, discomfort at being evaluated by faculty members, worrying about giving patients the wrong information or medication and concern about possibly harming a patientare just a few of the stressors for student nurse.[61]

Lazarus[5]states that appraisal is how people interpret the impact of the stressor on themselves, of what is happening and what they can do about it. Stress arises from any interaction between an individual and the environment when the individual perceives the situation as threatening, challenging or possibly damaging. Essentially, the individual perceives that a situation may tax or exceed the individual's resources

A stressor can be social, physiological or environmental origin.[7]"How a person copes can influence the degree, duration, and frequency of a stressful event." It's important to learn how to recognize when your stress levels are out of control. One cannot completely eliminate stress from one's life,but can control how much it affects. One may feel like the stress in life is out of control, but can always control the

way one responds[8]. There are many ways to cope with stress. Research on stress indicates that people tend to use a number of different coping approaches rather than just one.[9,10]

In 1914, Harvard physiologist Walter Cannon first coined the term fight or flightresponse to describe the dynamics involved in the body's physiological arousal tosurvive a threat" This response is known as our stress response" The fight aspect can involve a physical argument, verbal assaults, and increasingly more common, the use of technologies such as email and text messaging. Whereas, the flight response includes physically escaping the stress, as well as through escapism such as playing video games and the use of drugs or alcohol. Freezing is often seen in cases involving young children. For example, children, when exposed to an acute stressor, will freeze as a means of coping with the stressor. It is important to understand our bodies stress response in order to help recognize the effects of stress on humans. In a healthy stress response, once the stressor is no longer a threat, the body begins to recover and regain homeostasis. An unhealthy stress response occurs when the individual is unable to recover from the stressor or when the stressor is ongoing and prolonged. As a result, the body and mind is uncomfortable with the thoughts and sensations it's experiencing and quickly works to internalize and/or inhibit the stress reaction. Individuals can develop maladaptive coping behaviours in order to avoid their uncomfortable thoughts and feelings. However over time, this often leads to deregulation in the body, which can manifest itself in problems like depression and anxiety disorders.[74]

Lazarus and Folkman[60] proposed that the cognitive appraisal of a stressor involves both Primary and Secondary appraisals that occur at virtually the same time and interact to determine the significance and meaning of events with regard

to well-being. During primary appraisal, an individual considers the personal significance of a situation with regard to their own values, personal beliefs, situational intentions, and goal commitments. Primary appraisal considers the implications of a stressor for well-being through interpreting situations in one of these ways: (a) irrelevant, where there are no implications for well-being; (b) benign/ positive where the demands of the task are perceived as not threatening and it is possible to preserve or enhance well-being; (c) stressful where the demands of the task are perceived to threaten well-being. Secondary appraisal refers to a cognitive-evaluative process that focuses on minimizing harm or maximizing gains through coping responses. It involves purposeful evaluations of cognitive, affective, and behavioural efforts to manage a stressor Coping options and available resources may include social, physical, psychological and material assets. Perceived control over events is also considered as part of secondary appraisal as the individual decides what can or cannot be done to manage specific external and/or internal demands that are appraised as surpassing a person's resources. Coping is required only for following events that are perceived as stressful.And as such benign or positive appraisals do not require copingand responses It is widely recognized that coping has two primary functions. One function is to regulate stressful emotions (emotion-focused coping) using strategies such as venting oracceptance, the other function is to alter the circumstances causing thedistress (problem-focused coping) using strategies such as increased effort or planning.

According to Lazarus and Folkman[5], a stressor is perceived as stressful when the situation is appraised by the person as exceeding his or her resources and endangering his or her well being. Doing something and refraining from doing

something about the stressful situations are ways of coping. Coping is the constantly changing cognitive and behavioural efforts for managing specific external or internal demands that are appraised as exceeding the resources of the person. It is the process by which a person manages the appraisal. The function of coping includes managing or alleviating the problem causing the distress and regulation the emotional response to the problem. Once the person has successfully coped with a situation, reappraisal occurs. Reappraisal allows for feedback about the outcome and allows for adjusting to the new situation. Successful coping results in adaptation Coping has been viewed as a stabilizing factor that may assist individuals in maintaining psychosocial adaptation during stressful events. The process of coping is a very complex response that occurs when an individual attempts to remove stress or a perceived threat from the environment. Thus, the actual reaction to an environmental event may be as important as the event itself.When stress occurs, a person uses physiological andpsychological energy to respond and adapt to a particular situation. This type of coping strategy usually depends on the intensity, duration and number of stressors. Active coping strategies which are viewed as positive coping, generally includes strategies such as problem solving, seeking emotional support from others and engagement in leisure pursuits.However the avoidance and maladaptive coping primarily refers to strategies when individuals try to avoid dealing with problems by cognitively and physically distancing themselves from the situation.[58]

Coping responses can be described as positive or negative and as reactive (i.e. reacting to an individual's own thoughts and feelings) or active (dealing with actual stressful situations or events). Active or reactive coping responses can be positive or negative, depending on the situation and the content of the response [6]. The coping process is an important aspect of the person-environment interface. The kinds of

coping strategies used in a given situation are a function of individual differences in personality or experience as well as characteristics of the situation. Problem-focused coping strategies are designed to help people live longer, feel better and avoid having self-defeating thoughts. They assist people to understand themselves. This type of interventions target the individual thoughts as a cognitive process. It is based on the theory that changes in our emotions and behaviours are determined by our thoughts about events that occur. People are often disturbed by their view on perception of events rather than the events themselves. By being able to change the way that one think about things, then one can be able to change the way that they also feel about them.[11,12] Cognitive-behavioral coping strategies are the most effective methods to reduce the stress.[13]

Based on the research done by Folk man and Lazarus, the researchers Carver, Sheier and Weintraub[101] have devised a detailed coping inventory and added a few additional dimensions of coping. This tool was used by Kirkland in a study on African American student nurses' perception of stressors in clinical and their use of coping strategies. Problem-focused coping involves actions such as: taking action to remove stressor; planning how to confront stressor; suppressing competing activities (putting other projects aside in order to deal with the stressor); restraint coping (waiting until an appropriate opportunity to act presents itself); seeking social support for instrumental reasons (seeking advice, assistance or information) Emotion-focused coping involves: seeking social support for emotional reasons (getting moral support, understanding, or sympathy); positive reinterpretation and growth; acceptance; turning to religion; focusing on and venting of emotions; denial; behavioural disengagement (reducing effort to deal with stressor, or giving up on goal); mental disengagement (i.e. daydreaming, escaping through sleep, immersion in computer,

TV); alcohol and drug disengagement. Coping methods, whether emotion-focused or problem-focused can be judged by an individual as effective or ineffective.

In general, everyone experiences the stress, but students are a group of people who are at the higher risk of stressors due to the transitional nature of the student life; because they need to adjust themselves with the life environment which requires compliance with new social norms and new friendship. Accordingly, their perception from an event is affected as a stressor and selecting coping strategies which they use them in the particular situations. These groups should cope with the increasing global demands i.e. decision making about issues such as occupation, life style, friends, family, religion and politics. They should also meet the needs of family, teachers, friends and other groups; therefore, they establish important emotional ties with the environment or non-family members and also establish their own value systems which, in most of the cases, influenced by the family and the culture they have been belonged to.[38]Significant changes in living conditions, the novel demands of the college academic environment, and the large change in social surroundings are just a few of the potential sources of stress for a college student.[33]

College students experience high stress at predictable times each semester due to academic commitments, financial pressures, and lack of time-management skills. Moreover, regardless of year in school, college students often deal with pressures related to finding a job or a potential life partner. These stressors do not cause anxiety or tension by themselves. Instead, stress results from the interaction between stressors and the individual's perception and reaction to those stressors. Other potential sources of stress for college studentsinclude excessive homework, unclear assignments, and uncomfortable classrooms. In addition to academic requirements, relations with faculty members and time pressures may also be sources of stress.[40]

A study on Psychiatric morbidity in College and illiterate youths in India revealed that about 10% to 30 % of University student have emotional problems and nearly 30 % of them leave college or University without completing their studies. The types of emotional disorders in the college and the University students include severe mental disorders including psychosis (1 – 2 %), personality disorders (4 – 5 %), sexual problems (8 – 10%) and depression (3 – 4%).[52]

Thus, academic stressors cover the whole area of learning and achieving, as well as adjusting to a new environment, in which a great deal of content must be assimilated in a seemingly inadequate period of time.[53]Moreover, excessive stress may lead a student to drop out of college.[54] If stress is not dealt with effectively, feelings of loneliness and nervousness, as well as sleeplessness and excessive worrying, may result. It is important that stress intervention programs should be designed to address stress in college students. To design effective intervention programs, it is necessary to identify the stressors specific to college students. Student perception of high stress levels can lead to poor academic performance, depression, attrition and serious health problems. Methods to reduce student stress ofteninclude effective time management, social support, positive reappraisal, and engagement in leisure pursuits.[55]

Juminez PM, Navia – osoreio, Diaz CV found that student nurses experience clinical training stressors more intensively than academic or external stressors and display more psychological symptoms than physiological symptoms.[113]

Lazarus [79]distinguishes 15 basic emotions. Nine of these are negative (anger, fright,anxiety, guilt, shame, sadness, envy, jealousy, and disgust), whereas four are positive(happiness, pride, relief, and love). (Two more emotions, hope and compassion, have a mixed valence.) At a molecular level of analysis, the anxiety

reaction, for example, is based on the following pattern of primary and secondary appraisals: there must be some goal relevance to the encounter. Furthermore, goal incongruence is high, i.e., personal goals are thwarted. Finally, ego- involvement concentrates on the protection of personal meaning or ego- identity against existential threats. At a more molar level, specific appraisal patterns related to stress or distinct emotional reactions are described as core relational themes. The theme of anxiety, for example, is the confrontation with uncertainty and existential threat. The core relational theme of relief, however, is `a distressing goal-incongruent condition that has changed for the better or gone away' Coping is intimately related to the concept of cognitive appraisal and, hence, to the stress relevant person-environment transactions. Most approaches in coping research followFolkman and Lazarus who define coping as `the cognitive and behavioural efforts made to master, tolerate, or reduce external and internal demands and conflicts among them.' This definition contains the following implications. (a) Coping actions are not classified according to their effects (e.g., as reality-distorting), but according to certain characteristics of the coping process. (b) This process encompasses behavioural as well as cognitive reactions in the individual. (c) In most cases, coping consists of different single acts andis organized sequentially, forming a coping episode. In this sense, coping is often characterized by the simultaneous occurrence of different action sequences and, hence, an inter-connection of coping episodes. (d) Coping actions can be distinguished by their focus on different elements of a stressful encounter Lazarus and Folkman. They can attempt to change the person–environment realities behind negative emotions or stress (problem-focused coping). They can also relate to internal elements and try to reduce a negative emotional state, or change the appraisal of the demanding situation (emotion-focused coping).

Coping strategies are defined as the person's constantly changing cognitive and behavioral efforts to manage specific external or internal demands that are appraised as taxing or exceeding the persons resources.[69]Previous research showed that students with an active coping style have lower levels of psychological distress.[70]

In view of the potential long term benefits of managing stress in a more effective way, it may be important for students to develop such skills early in their medical career. Stress not only happens at workplace but students are subjected to different kinds of stressors, such as the presence of the academics with an obligation to succeed, an uncertain future and difficulties of integrating into the system. The students faced social, emotional, physical and family problems which might affect their learning ability and academic performance. As a result, it is important that individuals develop different strategies in order to manage stressful situations.[71,72]In terms of stress management, Lazarus and Folk man defined eight separate coping strategies that they believed individuals employed in stressful situations.These are confrontation, seeking social support, planned problem-solving, self-control, accepting responsibility, distancing, positive reappraisal, and escape/avoidance.[73]

Therefore, studying student stress and the methods which students use to deal with it can have important implications for higher education administrators.[56]According to the World Health Organisation (WHO) report, worldwide – 66 million suffer from depression, 24 million affected from alcohol related problems, 1 million people commit suicide each year (rates for attempted suicide are 10 – 20 times higher), 1 in 4 people is affected by mental or neurological disorders at some point of his or her life. This means such disorders are the fourth leading cause of ill health and disability worldwide. Mental disorders are expected to rank 2nd by 2020, behind ischemic heart disease.[57]

Stress-inducing academic demands include grade competition; lack of time and issues relating to time or task management the need to adapt to new learning environments in terms of the increased complexity of the material to be learned and the greater time and effort required to do so; and the need to constantly self-regulate and to develop better thinking skills, including learning to use specific learning techniques. Another category that evokes stress is social adjustment, particularly adjusting to university life and separating from family and friends. Finally, there are financial pressures and other technical difficulties [41] Archer and Lamnin found that tests, grades, competition, time demands, professors and the class environment, and concern about future careers were major sources of academic stress [42]. Stress and the identification of potential stressors among student nurses have received much attention in the literature.[43]

Student nurses have the same academic stressors as other college students, such as midterm and final examinations, research papers and other assignments In addition, student nurses experience a clinical component, which is highly stressful. Students have a large amount of preparatory work before their clinical assignments. They often must travel long distances to clinical sites and use highly technical equipment.[44]

However the dynamic relationship between the person and environment in stress perception and reaction is especially magnified in college students. The problems and situations encountered by college students may differ from those faced by their non-student peer.[65]

The environment in which college students live is quite different, while jobs outside of the university setting involve their own sources of stress, such as evaluation by superiors and striving for goals. The continuous evaluation that college students

are subjected to, such as weekly tests and papers, more which is not often seen by non-students. The pressure to earn good grades and to earn a degree is very high. In addition to academic requirements, relations with faculty members and time pressures may also be sources of stress.[66]

In addition, relationships with family, friends, eating, sleeping habits, and loneliness may affect students adversely.[67]

Top five major sources of stress were detected among nursing college students: change in sleeping habits, vacations, breaks, and change in eating habits, increased work load, and new responsibilities. Furthermore, stress may result from being separated from home for the first time, the transition from a personal to an impersonal academic environment, and the structure of the academic experience at the college level.[68]

Sax[14] found that 9.7% of college freshmen report frequent depression. Additionally, only 48% of female students and 59.3% of male students were confident of their mental health. Douglas, Collins and Warren[15] reported that on the National College Risk Survey as many as 10.3% of the students that participated had serious thoughts of suicide.Among college and university students, some stress is motivating whereas too high a level interferes with teaching Excessive stress can be harmful to a student's academic performance and students who perceive their stress levels as very high may often become depressed. This depression can lead to other mental health problems, such as excessive drinking or indiscriminate use of other substances.

One aim of Cognitive Behaviour Treatment is used to help individuals restructure their thoughts, which in turn should improve the way, the person feels about particular stressful situation.[109]Another aim of preventive and remedial psychological interventions is to increase the participants' personal awareness. When

a presenting issue is stress-related, it is important that students gain increased awareness of their personal response to the stressful situation.[110]

Timmins and Kaliszer[16] did factor analysis of various stressors that cause stress amongst student nurses. They had reported that the five factors which emerged, as sources of stress amongst student nurses were academic, relationship with teacher and staff in the ward, financial constraints, and the death of a patient. In another study,[17] the four main stressors in descending order were nursing studies, finances, family, and health.

The goal of any Nursing education programme is to graduate competent registered professional Nurses. During the process of acquiring and demonstrating skill competencies and passing written examinations, the Students undergo a considerable amount of stress. Apart from academic stressors, there are financial hardships and other personal stressors that the Student Nurses encounter. A great deal of stress is encountered by the Student Nurses in the course of adjusting to a rigorous course of clinical practice as they lack sufficient knowledge and skill to perform in duties.[18]

According to Melinda Smith MA and RobertSega,[75]Managing stress is all about taking charge: of your thoughts, emotions, schedule, and the way you deal with problems. Stress management starts with identifying the sources of stress in your life. This isn't as easy as it sounds. Your true sources of stress aren't always obvious, and it's all too easy to overlook your own stress-inducing thoughts, feelings, and behaviours. Sure, you may know that you're constantly worried about work deadlines. But maybe it's your procrastination, rather than the actual job demands, that leads to deadline stress.

To identify your true sources of stress, look closely at your habits, attitude, and excuses:

- Do you explain away stress as temporary ("I just have a million things going on right now") even though you can't remember the last time you took a breather?
- Do you define stress as an integral part of your work or home life ("Things are always crazy around here") or as a part of your personality ("I have a lot of nervous energy, that's all").
- Do you blame your stress on other people or outside events, or view it as entirely normal and unexceptional?

Until you accept responsibility for the role you play in creating or maintaining it, your stress level will remain outside your control.

Look at how you currently cope with stress

Think about the ways you currently manage and cope with stress in your life. Your stress journal can help you identify them. Are your coping strategies healthy or unhealthy, helpful or unproductive? Unfortunately, many people cope with stress in ways that compound the problem.

Unhealthy ways of coping with stress

These coping strategies may temporarily reduce stress, but they cause more damage in the long run:

- Smoking
- Drinking too much
- Overeating or under eating
- Zoning out for hours in front of the TV or computer

- Withdrawing from friends, family, and activities
- Using pills or drugs to relax
- Sleeping too much
- Procrastinating
- Filling up every minute of the day to avoid facing problems
- Taking out your stress on
- others (lashing out, angry outbursts, physical violence)

Learning healthier ways to manage stress

If your methods of coping with stress aren't contributing to your greater emotional and physical health, it's time to find healthier ones. There are many healthy ways to manage and cope with stress, but they all require change. You can either change the situation or change your reaction. When deciding which option to choose, it's helpful to think of the four 'A's': avoid, alter, adapt, or accept.

Since everyone has a unique response to stress, there is no "one size fits all" solution to managing it. No single method works for everyone or in every situation, so experiment with different techniques and strategies. Focus on what makes you feel calm and in control.

Dealing with Stressful Situations: The Four 'A's'

Change the situation:

Avoid the stressor.

Alter the stressor.

Change your reaction:

Adapt to the stressor.

Accept the stressor.

Stress management strategy 1: Avoid unnecessary stress

Not all stress can be avoided, and it's not healthy to avoid a situation that needs to be addressed. You may be surprised, however, by the number of stressors in your life that you can eliminate.

Learn how to say "no" – Know your limits and stick to them. Whether in your personal or professional life, refuse to accept added responsibilities when you're close to reaching them. Taking on more than you can handle is a sure-fire recipe for stress.

Avoid people who stress you out – If someone consistently causes stress in your life and you can't turn the relationship around, limit the amount of time you spend with that person or end the relationship entirely.

Take control of your environment – If the evening news makes you anxious, turn the TV off. If traffic has got you tense, take a longer but less-travelled route. If going to the market is an unpleasant chore, do your grocery shopping online.

Avoid hot-button topics – If you get upset over religion or politics, cross them off your conversation list. If you repeatedly argue about the same subject with the same people, stop bringing it up or excuse yourself when it's the topic of discussion.

Pare down your to-do list – Analyze your schedule, responsibilities, and daily tasks. If you've got too much on your plate, distinguish between the "shoulds" and the "musts." Drop tasks that aren't truly necessary to the bottom of the list or eliminate them entirely.

Stress management strategy 2: Alter the situation

If you can't avoid a stressful situation, try to alter it. Figure out what you can do to change things so the problem doesn't present itself in the future. Often, this involves changing the way you communicate and operate in your daily life.

Express your feelings instead of bottling them up. If something or someone is bothering you, communicate your concerns in an open and respectful way. If you don't voice your feelings, resentment will build and the situation will likely remain the same.

Be willing to compromise. When you ask someone to change their behavior, be willing to do the same. If you both are willing to bend at least a little, you'll have a good chance of finding a happy middle ground.

Be more assertive. Don't take a backseat in your own life. Deal with problems head on, doing your best to anticipate and prevent them. If you've got an exam to study for and your chatty roommate just got home, say up front that you only have five minutes to talk.

Manage your time better. Poor time management can cause a lot of stress. When you're stretched too thin and running behind, it's hard to stay calm and focused. But if you plan ahead and make sure you don't overextend yourself, you can alter the amount of stress you're under.

Stress management strategy 3: Adapt to the stressor

If you can't change the stressor, change yourself. You can adapt to stressful situations and regain your sense of control by changing your expectations andattitude.

Reframe problems. Try to view stressful situations from a more positive perspective. Rather than fuming about a traffic jam, look at it as an opportunity to pause and regroup, listen to your favorite radio station, or enjoy some alone time.

Look at the big picture. Take perspective of the stressful situation. Ask yourself how important it will be in the long run. Will it matter in a month? A year? Is it really worth getting upset over? If the answer is no, focus your time and energy elsewhere.

Adjust your standards. Perfectionism is a major source of avoidable stress. Stop setting yourself up for failure by demanding perfection. Set reasonable standards for yourself and others, and learn to be okay with "good enough."

Focus on the positive. When stress is getting you down, take a moment to reflect on all the things you appreciate in your life, including your own positive qualities and gifts. This simple strategy can help you keep things in perspective.

Stress management strategy 4: Accept the things you can't change

Some sources of stress are unavoidable. You can't prevent or change stressors such as the death of a loved one, a serious illness, or a national recession. In such cases, the best way to cope with stress is to accept things as they are. Acceptance may be difficult, but in the long run, it's easier than railing against a situation you can't change.

Don't try to control the uncontrollable. Many things in life are beyond our control— particularly the behaviour of other people. Rather than stressing out over them, focus on the things you can control such as the way you choose to react to problems.

Look for the upside. As the saying goes, “What doesn’t kill us makes us stronger.” When facing major challenges, try to look at them as opportunities for personal growth. If your own poor choices contributed to a stressful situation, reflect on them and learn from your mistakes.

Share your feelings. Talk to a trusted friend or make an appointment with a therapist. Expressing what you’re going through can be very cathartic, even if there’s nothing you can do to alter the stressful situation.

Learn to forgive. Accept the fact that we live in an imperfect world and that people make mistakes. Let go of anger and resentments. Free yourself from negative energy by forgiving and moving on.

Stress management strategy 5: Make time for fun and relaxation

Beyond a take-charge approach and a positive attitude, you can reduce stress in your life by nurturing yourself. If you regularly make time for fun and relaxation, you’ll be in a better place to handle life’s stressors when they inevitably come.

Healthy ways to relax and recharge

Go for a walk.

Spend time in nature.

Call a good friend.

Sweat out tension with a good workout.

Write in your journal.

Take a long bath.

Light scented candles.

Savour a warm cup of coffee or tea.

Play with a pet.

Work in your garden.

Get a massage

Listen to music.

Watch a comedy.

Don’t get so caught up in the hustle and bustle of life that you forget to take care of your own needs. Nurturing yourself is a necessity, not a luxury.

Set aside relaxation time. Include rest and relaxation in your daily schedule. Don’t allow other obligations to encroach. This is your time to take a break from all responsibilities and recharge your batteries.

Connect with others. Spend time with positive people who enhance your life. A strong support system will buffer you from the negative effects of stress.

Do something you enjoy every day. Make time for leisure activities that bring you joy, whether it be stargazing, playing the piano, or working on your bike.

Keep your sense of humor. This includes the ability to laugh at yourself. The act of laughing helps your body fight stress in a number of ways.

Stress management strategy 6: Adopt a healthy lifestyle

You can increase your resistance to stress by strengthening your physical health.

Exercise regularly. Physical activity plays a key role in reducing and preventing the effects of stress. Make time for at least 30 minutes of exercise, three times per week. Nothing beats aerobic exercise for releasing pent-up stress and tension.

Eat a healthy diet. Well-nourished bodies are better prepared to cope with stress, so be mindful of what you eat. Start your day right with breakfast, and keep your energy up and your mind clear with balanced, nutritious meals throughout the day.

Reduce caffeine and sugar. The temporary "highs" caffeine and sugar provide often end in with a crash in mood and energy. By reducing the amount of coffee, soft drinks, chocolate, and sugar snacks in your diet, you'll feel more relaxed and you'll sleep better.Avoid alcohol, cigarettes, and drugs. Self-medicating with alcohol or drugs may provide an easy escape from stress, but the relief is only temporary. Don't avoid or mask the issue at hand; deal with problems head on and with a clear mind.

Get enough sleep. Adequate sleep fuels your mind, as well as your body. Feeling tired will increase your stress because it may cause you to think irrationally[74]practise stress management techniques can help prevent professional burnout. Research has also shown that participants who practise stress management reap many personal benefits. Shapiro[76] performed a meta-analysis study of stress management programs in medical schools and reported medical trainees participating in stress-management programs demonstrated: (1) improved immunologic functioning; (2) decreases in depression and anxiety; (3) increased spirituality and empathy; (4) enhanced knowledge of alternative therapies for future referrals; (5)improved knowledge of the effects of stress; (6) greater use of positive coping skills; and (7) the ability to resolve role conflicts.

When dealing with stressful situation, most people use problem-focused and emotion-focused coping. The Student Nurses should be assisted by fostering awareness of coping strategies and by helping to minimize perceived stressors. Mainly, they should be encouraged to have an optimistic attitude, to be more

understanding and less critical during clinical practice, venting of emotions with peers, friends or family members, time management skills in order to navigate the large amount of material in a short time, relaxation and problem solving skills.

1.2.Significance and need forthe study

A study was conducted by Sayed FN, Hagani[19] in Tehran to determine sources of stress and coping strategies in student nurses studying at Iran faculty of nursing. The method adopted was descriptive cross sectional study in which 366 students were included in the study. 'The Student Stress Survey' and 'The adolescent coping orientation for problem experiences inventory' were used for data collection. The result interpreted that the frequent stressors were increased class workload and clinical exposure. The study concluded that, first year student nurses are more exposed to a variety of stressors and establishment of a 'student support system' is necessary for them for their effective coping.

Researches indicated that stress management was associated with reduction of the depression and anxiety symptoms. Kang also in his study [20]titled as "the effectiveness of a stress coping program based on mindfulness meditation on the stress, anxiety, and depression experienced by student nurses in Korea" showed that the above approach could be effective in reduction of the stress and anxiety of the student nurses.

The effectiveness of stress management training on the academic achievement of Tiran and Karvan's students was investigated; the results showed that stress management training could result in progression in academic achievement.[21]

Though we heard a lot about stress and coping behaviours among Student Nurses from the West, it is not as such studied in our Indian Culture. So the

researcher felt the need of assessing the stressors, level of stress and coping behaviours employed by the Students in response to stressful situations.

Secondly the freshers were not aware of coping strategies in the first year itself. If they become aware of adaptive coping strategies, they can be able to lead a life smoothly in the after coming years. Due to their ignorance, some maladaptive strategies can be used by them. In order to make the Student to appraise the event or occurrences cognitively positive and to facilitate the Student's success, the researcher has planned to teach about adoptive coping strategies like Time management, Positive reappraisal, Relaxation, problem solving and ventilation of emotions.

1.3.Statement of the problem

A study to assess the level of stress and coping behaviours and to evaluate the effectiveness of selected coping strategies among Student Nurses in selected institutions of Tamil Nadu.

Aim and objectives

1.4.Aim

- The aim of the study is to assess the level of stress and coping behaviours and to help the Students to be aware of adaptive coping and to practise those behaviours in their day today lifeamong first year Student Nurses.

1.5.Objectives

- To assess the pre-test level of stress and coping behaviours among Student Nurses in interventional and control group.
- To assess the post-test level of stress and coping behaviours among Student Nurses in interventional and control group.

- To evaluate the effectiveness of coping strategies on the level of stress and coping behaviours among Student Nurses
- To find out the correlation between the stress and coping behaviours in interventional and control group.
- To find out the association between the stress with selected demographic variables of experimental and control group.
- To find out the association between the coping behaviours with selected demographic variables of experimental and control group.

1.6.Hypothesis

H_1: There is a significant difference between pre-test and post-test level of stress and coping behaviours among Student Nurses in the interventional group.

H_2: There is a significant reduction in the level of stress and increase in the level of coping behaviours among student nurses in the interventional group compared to the students in control group.

H_3: There is a significant correlation between the level of stress and coping behaviours among Student Nurses

H_4: There is a significant association between the level of stress among Student Nurses with selected demographic variables

H_5: There is a significant association between the level of coping among Student Nurses with selected demographic variables

1.7.Operational definitions

Stress

In this study, stress refers to the relationship between the Student Nurses and their environment that is appraised by them as taxing or exceeding his or her

resources and endangering his or her wellbeing in areas like academics, time balance, interpersonal, intrapersonal, family and environmental factors as measured by a 5 point Likert scale.

Coping behaviours

In this study, coping behaviours are the adaptive response elicited from the students' behaviour that maintains a healthy response in the areas of academics, time balance, intrapersonal, interpersonal, family and environmental factors, as measured by a 5 point Likert scale.

Effectiveness

It refers to the outcome of selected coping strategies in terms of improvement in coping behaviours which is due to the result of adaptive coping of the student nurses , as elicited through stress scale and coping inventory of 5 point likert scale.

Selected coping strategies

In this study, these are the interventions which are designed to increase self management to allow persons to change the things that can be changed and accept the things that cannot be changed which includes time management, positive reappraisal, relaxation, problem-solving and decision- making and ventilation.

Student nurses

In this study, it refers to studentswho are studying I year in the institutions which are offering B.Sc Nursing programmes affiliated to TN DR MGR medical university in selected places of Tamil Nadu.

Selected places of tamilnadu

In this study is refers to the students studying B.Sc., Nursing Programme from selected places of Madurai, Viruthunagar&Pudukottai Districts.

1.8. Assumptions

Stressors in day today life not only affect Student Nurse's physical health but also their emotional ,social relationships and academics.

Coping strategies like time management, positive thinking, problem-solving and decision making, relaxation and ventilation in their day-today activities can promote the mental health and improve academic achievement and provide clinical services in the hospital by the students.

1.9. Delimitations

The following delimitation was applied:

- Since only B.Sc. student nurses are included in this study, the results may not be generalized to Diploma and Post-basic students
- B.Sc. Only I year B.Sc. nursing degree students studying at selected institutions, Madurai, Tamil Nadu have been selected.
- The participants constitute a purposive sampling that may limit transferability of results to other populations.
- Only five coping strategies were taught
- The responses of the participants were elicited through 5 point likert scale

1.10.projected outcome

- The findings of the study reveal the effectiveness of selected coping strategies in reducing the level of stress among first year B.ScStudent nurses.

- The findings of the study will help the authorities of Nursing education to plan stress management programmes for first year student Nurses to cope up in their lives.

CHAPTER II

REVIEW OF LITERATURE

Review of literature is a critical summary of research on a topic of interest generally prepared to put a research problem in context to identify gaps and weakness in prior studies so as to justify a new investigation. Literature reviews play a critical role for nurses seeking to develop an evidence based practice. It can inspire new research ideas and help to lay the foundation for studies.

Literature review is an essential step in the whole process of research. It is done in order to broaden understanding and create an insight in the researcher regarding the selected area. It also helps to select the appropriate methodology, tool development and analysis.[15]

Review of literature for the study presented under the following headings.

2,1 Literature related to stress and coping

2.2 Literature related to studies on stress and coping among student nurses

2.3 Literature related to studies on the effectiveness of coping strategies among student nurses

2.4 Conceptual Frame Work

2.1 Literature related to stress and coping

For the last five decades the term stress has enjoyed increasing popularity in the behavioral and health sciences. It first was used in physics in order to analyze the problem of how manmade to carry heavy loads and resist deformation by external focus. In this analysis, stress referred to external pressure or force applied to a structure, while strain denoted the resulting internal distortion of the object In the

transition from physics to the behavioral sciences, the or psychological demands on an individual. The external forces that impinge on the body are called stressors.[77]

Stress is a natural phenomenon that everyone experience in his or her life time[22] and is caused by stress causing factors or stressors.[23] Ram Chandra Rao spoken about concept of stress in India. He suggests that there are two Sanskrit words 'klesa' and 'duhkha', which are the causes of stress. Several studies have shown that stress is harmful for mental and physical health[24]. Constant stress brings about changes in the balance of hormones in the body which may lead to the situation or thought that makes us feel frustrated, angry, nervous, or anxious.[25]

Stressors are often thought of as being external. However, Vogel and Bower[78] explained that stress can also manifest from within the mind of the individual. We create our own stress, make our own stressful events, and cause our own diseases. These processes are based on specific genetic vulnerabilities, individual experiences, and environmental circumstances. Therefore, not only are we responding to stressors as part of everyday life, but we also are responsible for manifesting stress based on how we perceive and interpret our experiences. The degree to which an individual is susceptible to the effects of stress and how it manifests in a person's life is variable by the nature and extent in which it is experienced.

Seyle[79] viewed stress as a response to noxious stimuli or environmental stressors and defined it as the "nonspecific response of the body to noxious stimuli. Thus, he defined stress as a response, and it became the dependent variable in stress research. His work focused on describing and explaining a physiological response pattern known as the general adaptation syndrome (GAS) that was focused on retaining or attaining homeostasis, which refers to the stability of physiological systems that maintain life (e.g., body temperature, heart rate, glucose levels). The

following are the basic premises of his theory: (a) The stress response (GAS) is a defensive response that does not depend upon the nature of the stressor; (b) the GAS, as a defense reaction, progressed in three well-defined stages (alarm, resistance, and exhaustion); and (c) if the GAS is severe enough and/or prolonged, disease states could result in death or the so-called diseases of adaptation.

In his early work, Selye[79] proposed that cognitive variables such as perception played no role in contributing to the initiation or moderation of the GAS. In his 1983 edition he[80]extended his thinking to include both negatively and positively toned (eustress) experiences that could be contributed to and moderated by cognitive factors. It is important to note, however, that Selye's basic theoretical premise that stress was a physiological phenomenon was not altered. In the absence of a modification of his theory, it was not possible to explain psychological stress. This could not be done in the context of a theory that was strictly limited to physiology and neglected cognitive-perceptual factors. In fact, problems inherent in a normative or generalized response theory were demonstrated when Mason[81] disconfirmed the non-specificity of physiological responses to noxious stimuli in rats and monkeys.

As a social-personality psychologist, Richard Lazarus[82] became interested in explaining the dynamics of troublesome experiences. He developed and tested a transactional theory of stress and coping He believed that stress as a concept had heuristic value, but in and of it was not measurable as a single factor. Lazarus contended that stress did not exist in the event but rather is a result of a transaction between a person and his or her environment. As such, stress encompasses a set of cognitive, affective, and coping factors.

In 1966, Lazarus[79] identified two forms of coping: direct action and palliative. In 1984, Lazarus and Folkman changed the names of these two forms to problem-

focused and emotion-focused, respectively. Problem-focused coping strategies are similar to problem-solving tactics. These strategies encompass efforts to define the problem, generate alternative solutions, weigh the costs and benefits of various actions, take actions to change what is changeable, and, if necessary, learn new skills. Problem-focused efforts can be directed outward to alter some aspect of the environment or inward to alter some aspect of self. Many of the efforts directed at self fall into the category of reappraisals—for example, changing the meaning of the situation or event, reducing ego involvement, or recognizing the existence of personal resources or strengths.

Emotion-focused coping strategies are directed toward decreasing emotional distress. These tactics include such efforts as distancing, avoiding, selective attention, blaming, minimizing, wishful thinking, venting emotions, seeking social support, exercising, and meditating. Similar to the cognitive strategies identified in problem-focused coping efforts, changing how an encounter is construed without changing the objective situation is equivalent to reappraisal. The following are common examples: "I decided that something a lot worse could have happened" or "I just decided there are more important things in life." Unlike problem-focused strategies, emotion-focused strategies do not change the meaning of a situation directly. For example, doing vigorous exercise or meditating may help an individual reappraise the meaning of a situation, but the activity does not directly change the meaning. Emotion-focused coping is the more common form of coping used when events are not changeable [79]

Another important construct in Lazarus's transactional model [80] is emotion—specifically emotions that are considered to be stress emotions. These include, but are not limited to, anxiety, fear, anger, guilt, and sadness Lazarus (2000) presents cogent arguments for the explanatory power of the cognitive theory of emotion. Although

thoughts precede emotions, (that is, emotions are shaped by thought processes) emotions can in turn affect thoughts. The primary appraisal of threat and the specific meaning of the situation to the person triggers a particular stress emotion consistent with its meaning. Lazarus and Lazarus and Folkman link stress-related variables to health-related outcomes. All of the constructs in their transactional model, when taken together, affect adaptational outcomes. The theorists propose three types of adaptational outcomes: (a) functioning in work and social living, (b) morale or life satisfaction, and (c) somatic health. They view the concept of health broadly to encompass physical (somatic conditions, including illness and physical functioning), psychological (cognitive functional ability and morale—including positive and negative effects regarding how people feel about themselves and their life, including life satisfaction), and social (social functioning).

Sarafino and Ewing[102] emphasize being able to assess and reduce student's stress is of paramount importance to college counseling and health centers. They emphasize the role that stress can play in causing psychological and physical illnesses such as hypertension, headaches and even the common cold. Their research focused on life event stress and the stress of daily “hassles”. Life events referred to major changes in ones life such as employment, personal relationships or health. The term “hassles” referred to common annoyances or irritants such as misplacing items, time pressures or interpersonal conflicts. Results were related to frequency, perceived unpleasantness and the process of rumination, or as they term it “dwelling”. Their research validated that many times the severity of the perceived stress is often dependent on the individuals' coping skills. Also, students that dwell on stressors and problems will often continue to experience chronic anxiety and strain after the actual stressor is no longer present[91].

Stress, Coping, and Health Outcomes as Defined in Stress Theories

Scientific view	*Conceptualization of stress*	*Conceptualization of coping*	*Health outcomes*
Response based (Selye, 1956, 1983)	Stress is the nonspecific response to any noxious stimulus. The physiological response is always the same regardless of stimulus— the general adaptation syndrome (GAS).	There is no conceptualization of coping per se. Instead, Selye used the concept of "resistance stage," the purpose of which is to resist damage (this concept is part of the GAS).	On the basis of the assumption that each person is born with a finite amount of energy and that each stress encounter depletes energy stores that cannot be rejuvenated, it was proposed that stress causes "wear and tear on the body" that can result in various diseases based on the person's genetic propensity.
Stimulus based (Holmes & Rahe, 1967)	The term *stress* is synonymous with "life event." Life events are "stress" that require adaptation efforts.	Coping is not defined.	A summative accumulation of adaptation efforts over a threshold level makes a person vulnerable to developing a physical or mental illness (operationalized as disease) within 1 year.
Transaction based (Lazarus, 1966; Lazarus & Folkman, 1984)	The term *stress* is a "rubric" for a complex series of subjective phenomena, including cognitive appraisals (threat, harm, and challenge), stress emotions, coping responses, and reappraisals. Stress is experienced when the demands of a situation tax or exceed a person's resources and some type of harm or loss is anticipated.	Coping is conceptualized as efforts to ameliorate the perceived threat or to manage stress emotions (emotion-focused coping and problem-focused coping).	Adaptational health outcomes are conceptualized as short term and long term. Short-term outcomes include social functioning in a specific encounter, morale in the positive and negative affect during and after an encounter, and somatic health in symptoms generated by the stressful encounter. Long-term outcomes include social functioning, morale, and somatic health. Both short-term and long-term health outcomes encompass effective, affective, and physiological components

Although Jones and Johnston's research study did not focus directly on stress and coping related to clinical experiences, it provided useful information about coping among student nurses in general. First year students in their study reported mainly academic items such as fear of failing, long hours of study and lack of free time as their main sources of stress. The authors of this study examined the use of coping methods in relation to the level of distress experienced by student nurses. Students whose level of distress was lower used problem-focused coping methods, whereas the students, who experienced higher level of distress, engaged in non-direct (or emotion-focused) coping methods such as hostility or wishful thinking[63].

According to the Neuman Systems Model,[111] "Nursing is prevention as intervention" The concepts prevention and intervention include three components: primary prevention, secondary prevention, and tertiary prevention. Primary prevention is the process through which client-client system stability is accomplished. Intervention may begin at any point when stressors are either suspected or identified. Primary intervention is used when the stressor has not invaded the normal line of defense and has not produced symptoms of anxiety. Secondary prevention should be initiated when a stressor invades the normal line of defense or when a primary intervention is not implemented or is unsuccessful. The goal of secondary intervention is to achieve client-client system wellness by strengthening the line of resistance to promote reconstitution.[112] Tertiary prevention as intervention is implemented during reconstitution in an attempt to return the clientclient system to wellness with a focus on maintenance .Strategies to decrease undergraduate nursing student anxiety in the clinical learning environment are considered primary and secondary interventions because strategies can be initiated at the start of a clinical rotation as a preventative measure or at the time a student is identified as experiencing anxiety.[111]

2.2. Studies related to stress

Descriptive cross-sectional study was conducted to determine sources of stress and coping strategies in student nurses studying at the Iran Faculty of Nursing & Midwifery. All undergraduate student nurses enrolled in years 1-4 during academic year 2004-2005 were included in this study. Results of the study revealed that first year student nurses are exposed to a variety of stressors. The results also provided important clues for establishing a student support system during the first year and improving it throughout nursing school is necessary to equip student nurses with effective coping skill.[27]

There are many sources of stress in college students. Ross, Niebling and Heckert[55] used the Student Stress Survey to identify the major sources of stress in this population. The researchers surveyed 100 undergraduate students at a mid-sized midwestern university. The survey consisted of 40 items that were divided into four categories of potential sources of stress. These categories included interpersonal sources of stress, intrapersonal sources of stress, academic sources of stress and environmental sources of stress. The interpersonal sources of stress were the result of interactions with others such as a fight with a girlfriend or boyfriend or trouble with an individual's parents. The intrapersonal source of stress indicated a change within the individual such as sleeping or eating habits. Academic sources of stress identified school related activities such as an increase in workload, difficulty in assignments and examinations or transferring schools. Lastly, environmental sources of stress were related to problems outside of the school area such as difficulties with a vehicle or computer. Additionally, the categories were subdivided into daily annoyances such as financial difficulties or major life events such as a divorce, death in the family, change in alcohol or drug use. The top five sources of stress identified in this study were a

change in sleeping habits, vacations and breaks, a change in eating habits, new responsibilities and increased class workload These results indicate that three of the top five stressors of college students are intrapersonal. The researchers recommend further study,as these results identify the frequency of stressors rather than the severity of the perception of stress and the ensuing impact upon the individual.

A descriptive study was to identify stressful events of first-year Nepalese student nurses in the clinical setting and to determine how they cope with the stressful events. The sample consisted of 104 student nurses who had been in the clinical setting for 6 to 8 weeks. Four stressful events identified were: interpersonal relationships, initial experiences, feeling helpless, and demeaning experiences. The most frequently reported stressful event was interpersonal relationship (50%). Eight categories of coping from students' description were problem-solving, accepting responsibility, seeking social support, self-control, tension reduction, avoidance, wishful thinking and negative feelings. The majority of students utilized the "seeking social support" category of coping.[100]

A relationship between stress in college students and poor health behaviours has been documented in several studies In a study by Hudd SS, Dumlao J and Muray D et al,[94] 145 undergraduate students were surveyed in an attempt to answer three important questions. These questions were: 1). Are students in certain demographic groups more prone to experience higher levels of stress than others? 2). Is there a relationship between stress and healthy or unhealthy behaviours? and 3). Do students experiencing high levels of stress have lower levels of self-esteem and perceive themselves to be less healthy? The results of the survey indicate that women are stressed more often than men. Results also indicate that students that report higher stress levels are more prone to unhealthy behaviours such as poor dietary habits, poor

sleeping habits and less exercise. Interestingly, there was no reported difference in the two groups in alcohol consumption. It was also found that students reporting higher stress levels perceive themselves to be less healthy and less satisfied with a variety of life factors such as their grade point average, weight and fitness level. This dissatisfaction with various life factors may lead to decreased self-esteem. It was not clear, however, if the high levels of stress reduce one's self esteem or whether the low self-esteem contributes to the stress levels that one perceives. The researchers recommend that universities design programs in time management and coordinating multiple tasks that would be adapted to the needs of students as they progress through their academic careers.

Sundaram S[28] conducted a comparative study on stress among 30 first year and 30 fourth year B.Sc student nurses in Chennai. The study revealed that the first year B.Sc. Student nurses had comparatively more stress and less coping than the final year B.Sc. Student nurses. The researcher suggests orientation classes for the newcomers and to conduct well organized guidance and counselling services to help the student nurses to carry on their course of study with less stress and adequate coping.

Pagana[93] surveyed 262 baccalaureate student nurses and found that personal inadequacy and a fear of making mistakes were constant stressors. Lindop[92] identified conflict between the ideal and real clinical practice was also a source of stress. He also found that time management problems, when trying to complete nursing tasks, added to a student's perception of stress. Bell,[6] found that anxiety and stress could interfere with learning a complex, psychomotor skill.

Parkes KR examines stressful episodes reported by student nurses (N = 150) interviewed during the early stages of their training at two general hospitals. The

approach is qualitative rather than empirical, and the paper focuses on how students perceive and interpret the day-to-day demands and frustrations they encounter in the course of their work in the wards. The episodes were classified into six major content areas. Three of these (the care of dying patients; interpersonal conflicts with other nurses; and insecurity about professional skills and competence) were found to account for two-thirds of the total episodes reported. The types of episodes are discussed in the context of literature findings relating to nursing stress. Underlying factors common to many episodes were the inadequate support and guidance given by senior nurses and clinical tutors, coupled with the students' lack of experience and the demanding nature of the ward environment. Ways in which adverse effects of stress among student nurses might be alleviated, including improving communication skills, enhancing social support, and the use of stress management techniques, are discussed in the light of this material Level of stress and coping strategies used by nursing interns.[82]

A correlation can be found between a student's academic stress and the individual's anxiety, time management and leisure satisfaction was conducted by Misra and McKeann[40] to investigate the interrelationship among these variables in 249 undergraduate university students. It was hypothesized that a student's academic stress would show a positive correlation with anxiety and a negative correlation with self-reported time management behaviors and leisure satisfaction. The research supported that effective time management skills seem to lower academic stress and anxiety. However, a strong correlation between leisure satisfaction and perceived academic stress was not demonstrated. It does appear that women have higher perceived stress levels than men, even though they reported higher effective time management skills. Additionally, students in the freshman and sophomore classes

reported much higher stress levels than juniors or seniors. The researchers attribute this fact to the lack of strong social support networks and that freshman and sophomores have not yet developed the coping skills of junior and senior students. Therefore it is recommended that faculty should encourage all students to attend time management seminars as well as stress management programs, early in their academic careers.

Yang Luo, Honghong Wang[36], conducted a correlation study on 288 college student nurses, to explore the factors affecting student nurses' psychological status, and the interactions between mental symptoms and stressful factors, coping style and social support in their early clinical experiences. The result of this study was that positive correlations were found between stressful events, negative coping styles, while negative correlations related to positive coping style, social support. They also found that stressful factors, negative coping style and social support all have main effects on mental symptoms. In order to improve the psychological condition of student nurses, the authors suggest that, apart from reducing the stress incidents and avoiding negative coping, it is very necessary to enhance the social support systems and to encourage them to adopt the positive coping styles.

A cohort study was carried out in order to evaluate the evolution of student nurses' perception of stressors associated with clinical practice by Xabier Zupiria, Gorostidia, Xavier Huitzi, Egilegorb, Mari Jose Alberdi Ericec et al.[84] Sixty-nine students answered the KEZKAK questionnaire at four stages of their studies. The most powerful stressors identified by students both at the beginning and at the end of their studies were: lack of competence, uncertainty, being harmed by the relationship with patients, emotional involvement, lack of control in relationships with patients, contact with suffering, relationships with tutors and companions, and overload.

Nevertheless, most of the stressors were found to lose stressor power during the course of nursing training. The researchers emphasized that interventions are necessary for helping student nurses to overcome their stress related to clinical experience.

Descriptive cross-sectional study was conducted to determine sources of stress and coping strategies in student nurses studying at the Iran Faculty of Nursing & Midwifery. All undergraduate student nurses enrolled in years 1-4 during academic year 2004-2005 were included in this study. Results of the study revealed that most students reported "finding new friends" (76.2%), "working with people they did not know" (63.4%) as interpersonal sources of stress, "new responsibilities" (72.1%), "started college"(65.8%) as intrapersonal sources of stress more than others. The most frequent academic source of stress was "increased class workload" (66.9%) and the most frequent environmental sources of stress were being "placed in unfamiliar situations" (64.2%) and "waiting in long lines" (60.4%).Interpersonal and environmental sources of stress were reported more frequently than intrapersonal and academic sources. Mean interpersonal (P=0.04) and environmental (P=0.04) sources of stress were significantly greater in first year than in fourth year students. Among coping strategies in 12 areas, the family problem solving strategies, "trying to reason with parents and compromise" (73%) and "going along with family rules" (68%) were used "often or always" by most students. To cope with engaging in demanding activity, students often or always used "trying to figure out how to deal with problems" (66.4%) and "trying to improve themselves" (64.5%). The self-reliance strategy, "trying to make their own decisions" (62%); the social support strategies, "apologizing to people" (59.6%), "trying to help other people solve their problems" (56.3%), and "trying to keep up friendships or make new friends" (54.4%); the

spiritual strategy, "praying" (65.8%); the seeking diversions strategy, "listening to music" (57.7%), the relaxing strategy "day dreaming" (52.5%), and the effort to "be close with someone cares about you" (50.5%) were eachused "often or always" by a majority of students. Most students reported that the avoiding strategies "smoking" (93.7%) and "drinking beer or wine" (92.9%), the ventilating strategies "saying mean things to people" and "swearing" (85.8%), the professional support strategies "getting professional counseling" (74.6%) and "talking to a teacher or counselor" (67.2%) and the humorous strategy "joking and keeping a sense of humor" (51.9%) were used "seldom or never".First year student nurses are exposed to a variety of stressors. Establishing an student support system during the first year and improving it throughout nursing school is necessary to equip student nurses with effective coping skills. Efforts should include counselling helpers and their teachers, strategies that can be called upon in these students' future nursing careers.[27]

Another descriptive cross-sectional study was conducted to determine sources of Stressors and coping strategies among 273 Baccalaureate Student nurses. The results of the study showed that 40.2% of student nurses who reported high stress most of them in mild levels (31.8%). Findings also indicated that student nurses experienced high stress levels over prolonged periods that exceeded stress levels in prior life events.[85]

Another study about sample survey on the aspects of nurse education programmes that frequently cause stress to student nurses. The result indicated that stress exists for students in both the clinical and academic aspects of the programme. Financial constraints and academic-related concerns emerged as the most stressful areas for the students. A third of the students reported that relationships with teachers and staff on the ward cause some degree of stress. Factor analysis revealed that five

factors emerged as sources of stress. Firstly, `academic' stress factors. The second and third components concern relationships, the former involving teaching-related staff, and the latter involving the clinical experience. The last two components suggest that finance and death of patients are independent sources of stress.[86]

A study was conducted to determine the levels of affective distress, sources of stress and coping strategies among 220 first-year student nurses in Tayside, Scotland. The result of the study showed that, 50.5% of students in cohort 1 and 67.9% of students in cohort 2 suffered significant affective distress. The study also concluded that distressed students reported the same sources of stress as the non-distressed students, but suffered them more intensely. The use of fantasy and hostility was associated with high levels of distress and stress, in both groups. This screen of first-year student nurses suggests that there is a problem with student distress around an initial series of general/surgical and psycho-social ward placements.[87]

A study was conducted in Ramban medical centre, Israel to identify nursing student`s perceptions of stress in their initial clinical setting experience. The method adopted was exploratory longitudinal study by using stress scale which include six subscales. The stress scale was administered three times during the clinical experience to 46 students. The result revealed that, there is significant difference in pre-clinical stress level and the actual level of stress in the clinical setting.[88]

A study was to understand the living experience of nursing student`s coping with the demands of their clinical practice. The method adopted was Husserl an phenomenological approach and the data revealed several strategies that, 14 student nurses utilized to cope with the demands of their undergraduate clinical programme. The result of the study revealed that, the students having a strong determination to complete their course and talking things over with family, friends and other students

as a means of coping, helped them to get relief from stress and also considered other nursing could really understand the feeling and experience of being as 'student nurse'.[89]

A study was conducted in Ireland to examine the stress experiences and coping abilities of student nurses. A survey design was adopted, as method and done it in a large Dublin teaching hospital. A questionnaire was used to assess the stressors pertaining the student nurses. It included clinical stress, academic stress, coping and personal factors. The results indicated that the level and intensity of academic workload, the theory practice gap and poor relationship with clinical staff and patients leading to stressors. Student adopted short term emotion focused coping strategies to deal with stress. The study recommended that the provision of adequate support services from a clinical and academic section, a lecture-practitioner model of education delivery which helps in developing student`s self awareness skills and reduction of stress.[51]

A study to identify experiences that led to both distress and eustress and to make recommendations to help students cope with course demands.. A series of focus groups were carried out with a volunteer sample of final year student nurses (n = 16) in the United Kingdom. The data were thematically analysed. Findings showed that the themes identified were clinical experience, support, learning and teaching experience and course structure. There were experiences within each that were perceived as sources of distress and eustress. Many of the sources of distress concur with earlier findings but they are more likely to be experienced and commented on because the demands of present-day programmes and the profile of many student nurses mean that more effort is invested in meeting educational demands. The experiential learning and patient-care opportunity that placements provided was an

important source of eustress. Conclusion. Students who coped well drew on effective support networks and adopted a positive, optimistic perspective towards programme issues. Effective educators did not offer more time than those perceived as less effective but seemed more effective at tuning into students' concerns, showing more empathy and offering clearer guidance.[90]

A research was conducted using the grounded theory to investigate how Iranian student nurses manage their time according to the circumstances and obstacles of their academic field method. Twenty-one student nurses were purposefully chosen as participants. Data was collected through semi-structured interviews and analyzed using the method suggested by Corbin and Strauss. One of the three processes that the student nurses used was "unidirectional time management." This pattern consists of accepting the nursing field, overcoming uncertainty, assessing conditions, feeling stress, and trying to reduce stress and create satisfaction. It was found that students allotted most of their time to academic tasks in an attempt to overcome their stress. The findings of this study indicate the need for these students to have time for the extra-curricular activities and responsibilities that are appropriate to their age.[98]

A study done by Tayebeh Mirzaei[103] to investigate how Iranian student nurses manage their time according to the circumstances and obstacles of their academic field. Research was conducted using the grounded theory method. Twenty-one student nurses were purposefully chosen as participants. Data was collected through semi-structured interviews and analyzed using the method suggested by Corbin and Strauss. One of the three processes that the student nurses used was "unidirectional time management." This pattern consists of accepting the nursing field, overcoming uncertainty, assessing conditions, feeling stress, and trying to reduce stress and create satisfaction. It was found that students allotted most of their

time to academic tasks in an attempt to overcome their stress. The findings of this study indicate the need for these students to have time for the extra-curricular activities and responsibilities that are appropriate to their age.

A descriptive study was performed to explore sources of stress and coping strategies among AU student nurses by Patra Phuekphan A.[108] Data were collected from 154 student nurses who enrolled in year one to four in academic year 2008. Two measurements, including Student Stress Survey and Adolescent Coping Orientation for Problem Experiences Inventory, were modified and employed. Descriptive statistics were applied for data analysis by using SPSS version 15.0. Results revealed that finding new friends and work with the unfamiliar people were ranked as the main sources contributing interpersonal stress; intrapersonal sources of stress represented by outstanding personal achievement and speaking in the public; academic stressors, the highly reported stressor were associated with using second language and increasing new responsibilities; and placed in unusual situation was environmental stressor. Furthermore, coping strategies that students always used to overcome stress composed of developing self-reliance and being humorous.

2.3 Studies related to effectiveness of coping strategies among student nurses

Bittman BB, Synder C, Bruhn KT., Liebfried F,Stevens SK, Westengard J[29] conducted a prospective cross over study, to examine the impact of a 6-session Recreational Music-making (RMM) protocol on burnout and mood dimensions as well as Total Mood Disturbance (TMD) in 75 first year associate degree student nurses from Allegany college of Maryland. Burnout and mood dimensions were assessed with the Maslac Burnout Inventory and the profile of Mood States respectively. This study shows that a statistically significant reduction of multiple burnout and mood dimensions as well as total mood disturbance scores in first year

associate degree student nurses. All this study finding shows importance and effectiveness of stress management program on student nurses.

A quasi-experimental study was conducted by Ram Kumar Guptha[105] to determine the effectiveness of yoga nidhra on stress level among student nurses (30 in study group and 30 in control group) in selected nursing institutes of Pune, India. Findings related to effectiveness of yoga Nidra show that the mean post –test stress level of the experimental group was lower than the mean pre-test stress level. Keeping in view of the study, the following recommendations are made: A study can be done using other alternative methods or techniques. It is also recommended to develop and implement policies to promote mental well-being of students. This will not only assist in the prevention of mental health problems but also contribute to a healthy working environment and reduced levels of stress.

A study was conducted by Macini J, Clegg R[30] to determine the effectiveness of a stress management programme and also to determine personal and professional stressors experienced, and coping strategies adopted by graduate student nurses. The stress management programme consisted of practice of relaxation response, imagery, and diaphragmatic breathing and the subjects were 30 female graduate student nurses. The method adopted was experimental study in which the students were randomly assigned to an experimental and a control group .The data collection consisted of blood pressure measurements, weekly Palmar Sweat Prints(PSP) and a weekly Self-Report(WSR). The result suggested that the control group reported significantly less strategies for coping with stress than the experimental group.

A study was conducted by van der JJ Klink RW Blonk, AH Schene and van Dijk FJ[95] to determine the effectiveness of occupational stress-reducing interventions and the populations for which such interventions are most beneficial. Methods of

Forty-eight experimental studies (n = 3736) were included in the analysis. Four intervention types were distinguished: cognitive-behavioral interventions, relaxation techniques, multimodal programs, and organization-focused interventions. Results showed that a small but significant overall effect was found. A moderate effect was found for cognitive-behavioral interventions and multimodal interventions, and a small effect was found for relaxation techniques. The effect size for organization-focused interventions was nonsignificant. Effects were most pronounced on the following outcome categories: complaints, psychologic resources and responses, and perceived quality of work life. It was concluded that Stress management interventions are effective. Cognitive-behavioral interventions are more effective than the other intervention types.

The study results of Davazdahemami et al[31] titled as "reviewing the effectiveness of stress management training in cognitive-behavioral technique on blood sugar and depression of patients with type II diabetes" indicated that stress management training program could reduce the depression mean score of the patients in the follow-up step, which this reduction was significant as compared with the control group.

A study aimed to determine the effect of a cognitive-behavioural stress management training program by Babak Moeini[96] based on PRECEDE model on stress reduction among nurses. In this quasi-experimental study, which was conducted among 58 female nurses in Hamadan, northwest Iran were enrolled in the study and were divided into two equal groups included 29 nurses from one Hospital and 29 nurses from the other as intervention and control groups respectively. The data collection tool was a self-administered questionnaire including demographic characteristics and nursing stress scale (NSS). In addition, a questionnaire based on

PRECEDE model was used in order to assess predisposing, reinforcing and enabling factors. The intervention was a training program including five sessions during three weeks in which relaxation and problem-solving training was thought. A pre-test and a post-test were performed 1.5 months apart. The t-test, Mann Whitney and Willxocon statistical tests were used for data analysis at 95% significant level using SPSS 13Results shown that the baseline score average of job stress was 113.0 and 109.8 for intervention and control groups respectively (P=0.250). After intervention, score average of job stress decreased to 94.0 in experimental group while that of control group remained relatively unchanged (109.2), (P<0.001). A significant difference was found in PRECEDE model constructs and stress management behaviours in intervention group compared to control group after training interventions (P<0.001).

Jain S, Shapiro S, Swanick S and Roesch SC et al.[97] conducted a randomized controlled trial to examine the effects of a 1-month mindfulness meditation versus somatic relaxation training as compared to a control group in 83 students. Results showed that hierarchical linear modelling reveals that both meditation and relaxation groups experienced significant decreases in distress as well as and increases in positive mood states over a time, compared with the control group (p<.05 in all cases). There are no significant differences between meditation and relaxation on distress and relaxation on distress and positive mood states over time.

An experimental study was conducted to assess the effectiveness of 10 sessions, 5 week stress management program among 18 student nurses of Texas Women's University, Canada. It included sessions on progressive relaxation, deep muscle relaxation and visual imagery. 10 student nurses served as the experimental group and the remaining as the control group. State and trait anxiety measures were taken prior to midterm and final examinations. The results revealed that, the stress

management group effectively reduced trait anxiety ($P < 0.05$), while the control group's levels remained relatively unchanged. The experimental group showed a reduction in state anxiety from the mid semester to final examinations, while the control group showed a slight increase in the same. It was concluded that stress management program is an effective way to reduce stress among student nurses.[99]

A study was done by Hamdan-Mansour AM, Puskar K, Bandak AG[107] to examine the effectiveness of cognitive behavioral therapy (CBT) with university students suffering from moderate to severe depressive symptoms in Jordan. Eighty-four university students were recruited and assigned randomly to control and intervention groups. Intervention impact was assessed on measures of depressive symptoms, perceived stress, and coping strategies at three time points; baseline, postintervention, and 3-months postintervention. The interventional model used was the Modified Teaching Kids to Cope (MTKC), and the control group received no treatment. Overall, using CBT showed a significant improvement in the outcome measures. At postintervention, students had lower scores on perceived stress, lower depressive symptoms, less use of avoidance coping strategies, and more use of approach coping strategies. The findings are discussed in terms of treatment implications and recommendations for use at academic and health care settings.

A study done by Richman CL, Brodish J, Haas F, Billings C[104] to examine the effect of designated interventions in nursing practice problems on levels of burnout in nurses. A battery of tests measuring burnout, self-esteem, depression, personal accomplishment, depersonalization, and emotional exhaustion were given to nurses in experimental and control groups. Pre and post-test data were gathered for both groups. The treatment included a 2-day conference which was designed as a respite experience to address problems specific to the nursing profession. Results

indicate significantly less burnout, less frequency of depersonalization, and significantly greater frequency of personal accomplishment in the scores of the experimental group relative to the control group. This study shows that specific interventions can be used to benefit the emotional well-being of nurses by providing them with a respite opportunity and the skills to manage key stressors in their professional environment.[104]

The investigating and assessing the effects of relaxation training on the levels of state anxiety concerning first year female student nurses at their initial experience in clinical setting. This research is a quasi experimental study that was carried out in nursing and midwifery faculty of Tehran university of medical sciences .The sample of research consists 60 first term female student nurses were selected through convenience and random sampling. 30 of them were the experimental group and 30 of them were in control group. The Instruments of data-collection has been a questionnaire which consists of 3 parts. The first part includes 10 questions about demographic characteristics the second part includes 20 question about anxiety (test 'Spielberg'). The 3rd part includes physiological indicators of anxiety (BP, PR, body temperature). The statistical tests included *t*-test and fisher test, Data were analyzed by SPSS software. The statistical test illustrates a significance difference between two groups of test and control after the training ($p=0.01$)[106]

2.4 Conceptual framework

Conceptual framework for the present study is based on Imogene King's Goal attainment Model (1981). King's goal attainment theory is based on the concepts of personal, interpersonal and social system including perception, judgment, action, reaction, transaction and feedback.

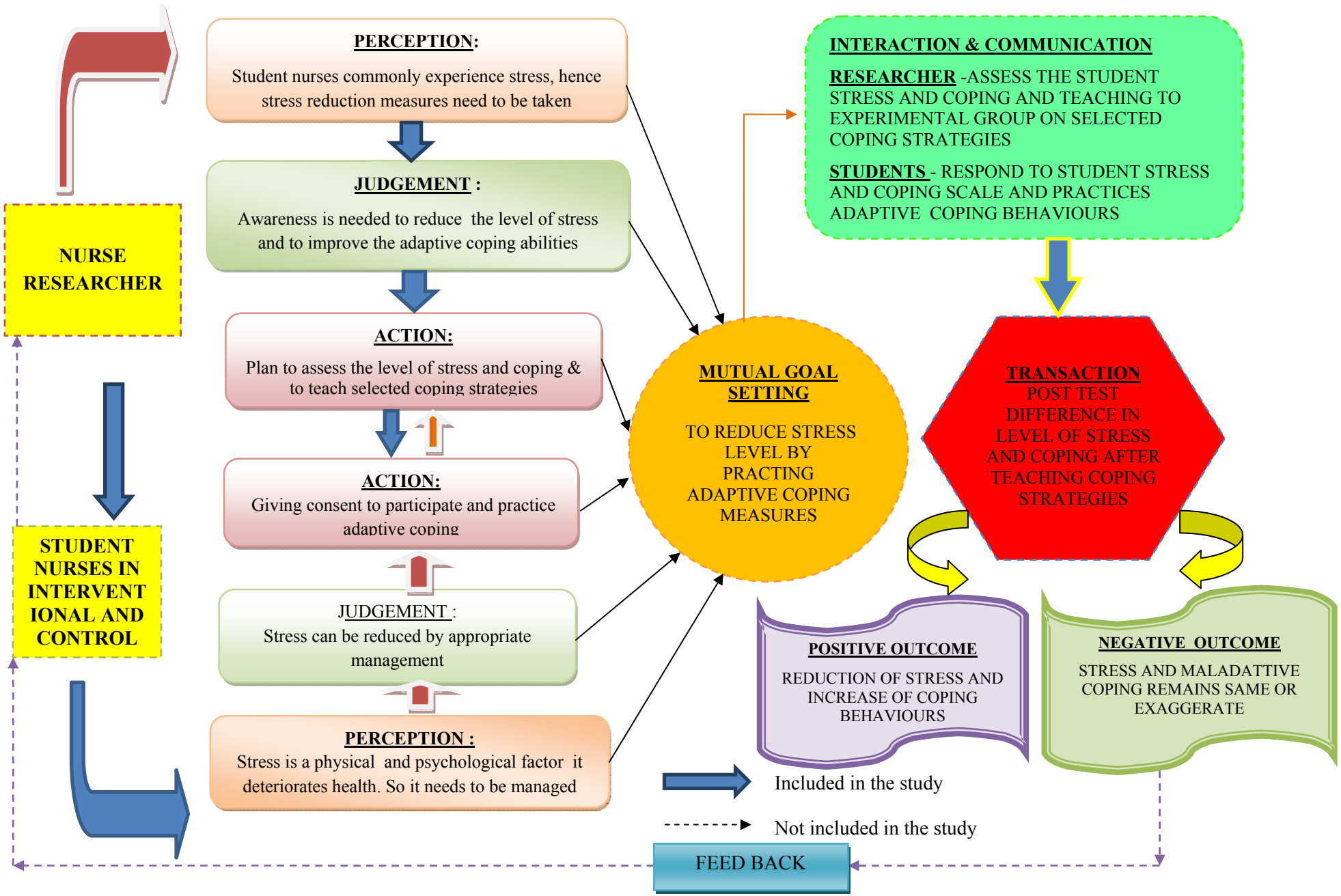

FIGURE 2.2. CONCEPTUAL FRAME WORK BASED ON IMOGENE KINGS MODEL (1981)

Perception:

A person imports energy from the environment and transforms processes and stores it. This includes perception, judgment and action on the part of the nurse investigator as well as the patients.

The nurse researcher perceives the stress as a commonly problem faced by student nurses.

Student nurses perceive that stress is a psychological factor which deteriorates health condition and so it has to be managed appropriately.

Here the nurse researcher analyses the area of action to be carried out for the student nurses and the student nurses express the need for the action.

Nurse researcher judges that practicing adaptive coping strategies may reduce the stress of the student nurses. Judge that stress can be controlled by effective management.

Action:

Here, the nurse researcher takes the actual action for the perceived need and the student nurses takes action by keeping themselves ready to receive the action.

The nurse researcher develops stress and coping scale to assess the levels of stress before and after intervention.

Mutual goal setting:

Here, the nurse researcher and the student nurses identify a common goal that is to obtain relief from stress and practise adaptive coping

Interaction and Communication:

Interaction: Refers to the verbal and nonverbal behaviour between an individual and the environment or between two or more individuals, it involves goal-directed perception and communication.

Communication: According to the Imogene King, communication refers to transmission of information from one person to another either directly (face to face) or indirectly (telephone call or written message). Communication is the information component of transaction.

In this study, the nurse researcher conducts pre-test to both experimental and control group and then gives stress management to experimental group followed by post-test I&II to both the groups.

Student nurses respond to stress and coping scale and practices adaptive coping Hence they interact and communicate.

Transaction:

It is a process of interaction between a person and environment for the purpose of goal attainment. It is the mutually identified goals of two or more individuals

In this study, difference in the post test level of stress and coping strategies was assessed after implementing coping strategies to the student nurses.

Feed Back:

The outcome may be either positive or negative. If the outcome is negative then the nurse researcher rearranges the situations where the process recycles.

Positive outcome:

Reduction of stress and increased coping level of student nurses

Negative outcome:

Stress level and coping remains same or exaggerated in the student nurses

CHAPTER - III

MATERIALS AND METHODS

According to Sharma, research methodology is a systematic procedure which the researcher starts from the initial identification of the problem to its final conclusion. The role of methodology consists of procedures and techniques for conducting a study.

This chapter deals with the methodology formulated for the problem selected and is discussed under the following headings such as research approach, research design, setting, population, sample, sampling technique, development and description of tool, scoring key, content validity, reliability, pilot study, procedure for data collection and plan for data analysis.

The present study has been undertaken to evaluate the effectiveness of selected coping strategies among Student Nurses in selected institutions of Tamil Nadu

3.1. Research approach

A quantitative approach using pre-test and post-test was adopted in order to accomplish the main objective of this study. The primary objective of this study is to determine the extent to which coping strategies reduces the level of stress among student nurses

3.2. Research design

The research design implied for this study was **Quasi- experimental study** in nature i.e., **before and after control the group design.**

GROUP	PRETEST	INTERVENTION	POSTTEST
1	0_1	X	0_2 and 0_3
11	0_1	___	0_2, and 0_3

GROUP 1 **:** Student nurses in the interventional group

GROUP 1I **:** Student nurses in the control group

O_1 **:** Pre -test assessment

X **:** Administration of interventional teaching

$0_2$and 0_3 : Post- test assessment

3.3. Variables

The categories of variables discussed in the present study were:

1. Independent variable

The independent variable in this study was a teaching programme regarding coping strategies to the I year B.Sc., Nursing Degree students in the interventional group. Students in the control group were not given teaching. But after the data collection they were orientated based on ethical consideration.

2. Dependent variable

There were two dependent variables in this present study.

- The first one was the level of stress score of student nurses measured by 5- point Likert scale.
- The second dependent variable of this study was the coping behaviours score of student nurses assessed by 5-point Likert scale.

3. Extraneous variable

In this present study, extraneous variables were age, sex, religion, education, and occupation of parents, place of residence, order of sib-ship, higher secondary marks, medium of language in schooling, leisure time activities, type of sociability, social activities.

3.4. Setting of study

The setting of this study includes selected nursing institutions, which are affiliated under the Tamil Nadu Dr.M.G.R Medical University. According to the need of this study, the six institutions were selected. They were assigned to two equal groups designated as the control and the interventional group.

3.5. Population

Target population

Student nurses studying from all Nursing colleges, recognized, affiliated and functioning under The Tamil Nadu Dr. M.G.R .Medical University, Chennai, Tamil Nadu.

Accessible population

Student nurses studying from the selected Nursing colleges of Madurai, Viruthunagar and Pudukottai districts of Tamil Nadu.

3.6. Sample

Samples were student nurses studying I year Bsc (Nursing) and those who fulfilled the inclusion criteria from selected nursing college of Madurai, Viruthunagar and Pudukottai districts of Tamil Nadu.

3.7. Sample size

In this present study, a total of 245 Student nurses were selected non-equivalently from six institutions, in which 126 students were included under interventional group from three institutions and remaining 119 students were under control group from other three institutions.

3.8. Sampling technique

Control and interventional groups were allocated by Non probability Purposive sampling.

In order to select the sample from the population, initially the consent letter was sent to all institutions located in and around Madurai. The institutions were selected only those who gave consent to conduct the study. According to the sample size of this present study, six institutions were finally chosen and utilized for the data collection. Among these selected six nursing institutions were allotted equally into two groups (i.e.3 in control and 3 in interventional group). Sample from three institutions were collected for interventional group and the other three institutions for control group.

In this study, the researcher purposefully decided to select only I year B.Sc., Degree Student nurses as samples who were judged to be typical of this study population. Based on this view, during the data collection period, the researcher selected the whole class of I year B.Sc., Degree Student nurses as samples from selected nursing institutions in order to potentially avoid bias. A total of 245 sample were selected using purposive sampling technique as experimental (n=126) and control group (n=119) from selected six nursing institutions. The design of sampling technique is depicted in the following figure.

3.8.1 Name of the Institution

GROUP	NAME OF THE INSTITUTION	TOTAL SAMPLE SIZE
INTERVENTIONAL	1. CSI.JEYARAJ ANNAPACKIAM CON, MADURAI	45
	2. SRINIDHI CON, MADURAI	25
	3. SURAN CON, RAJAPALAYAM	49
CONTROL	SRI.RAMACHANDRA NAIDU CON, SANKARAN KOIL	59
	ANNAI DORA CON, ANDIPATTI	23
	KEERAITAMILSELVAN CON, PUDUKOTTAI	44
	TOTAL	245

3.9. Criteria for sample selection:

Inclusion criteria

1. Only I year BSc (N) students.
2. Nursing colleges, recognized, affiliated and functioning under The Tamil Nadu Dr. M.G.R .Medical University.
3. Both genders are included.

Exclusion criteria

1. Colleges those who were not willing to participate in this study.
2. II, III and IV year BSc Student nurses were excluded

3.10.Description of the tool

In this present study, **t**he following tool was constructed by the researcher based on the objectives of this study. The following steps were adopted prior to the development of the tool:

- With the help of an extensive review of literature from various resources (text books, journals, periodicals, website, Medline search etc) in order to select the most suitable and appropriate tool for this present study.
- Personal experience of teaching and guiding the students in the class room as well as in the clinical field.
- Personal consultation and discussion with experts from nursing, education, research, and bio-statistics.
- Interaction with student nurses in the class room as well as in the clinical field.
- Preparation of the Blue print.

Part- 1 Demographic variables:

In this study, the developed tools comprised of four parts and are explained as follows:

PART 1: Demographic variables.

PART 2 : 5 point Likert scale on stress

PART 3: 5- Point Likert scale on coping behaviours

PART 4: Teaching module on "Coping Strategies"

PART I: Demographic Variables that involve 14 items containing age, sex, religion, education, and occupation of parents, place of residence, order of sib-ship, higher secondary marks, medium of language in schooling, leisure time activities, social activities, type of sociability.

The subjects were asked to place applicable alphabetical letters against each item.

Part-II : 5- Point Likert scale on stress

The instrument constructed by investigator is a 5 point likert scale comprised of 50 items under the six major components through which the researcher assessed the nursing student's stressors in various aspects.

The instrument is scaled as Seldom-1, rare-2,sometimes-3,Often-4,Always-5. The investigator would rate the components of stressors by placing a '√ ' mark against the respective column of each item, as per respondent's response.

These items were allotted under components of stressors as follows:

- Academics 12 items
- time balance 6 items
- inter personal 7 items
- Intra personal 15 items
- Family 4 items
- Environmental 6 items

Part III -5- Point Likert scale on coping behaviours

This instrument also was constructed by an investigator to collect data on the coping behaviours of nursing before and after the intervention. It is a self administered questionnaire of 5- point Likert scale. The instrument consisted of 50 statements equally distributed positively (25) and negatively (25) worded statements distributed under five areas with five different response options scaled as Seldom-1, rare-2, sometimes-3, Often-4, Always-5.In this scale 1, 3,5,7,9 in time management, relaxation, 2,4,7,8,10 in positive thinking ,1,2,7,9.10 in problem solving and decision making and 1,3,5,7,9 in ventilation were negatively worded statements and 2,4,6,8,10 both in time management and relaxation,1,3,5,6,9 in positive thinking, 3,4,5,6,8 in problem solving and decision making and 2,4,6,8,10 in ventilation were positively worded statements. The subjects were instructed to put a '√ ' mark against column provided. It has 50 statements, which were arranged under five major aspects of coping behaviours.

- time management 10 statements
- relaxation 10 statements
- positive thinking 10 statements
- problem solving and decision making 10 statements
- ventilation 10 statements

3.10.a) Scoring and Interpretation

Part-II : 5- Point Likert scale on stress

It is a self-administered one. The responses of the students were entered in appropriate columns of the respective statements under five different response options scaled as Seldom-1, rare-2, sometimes-3,Often-4,Always-5. Maximum

obtainable score is 250 and the total score is calculated for percentage. The level of stress was graded as follows

- Mild stress : 1-25%
- Moderate stress : 26-50%
- Severe : 51- 75%
- Very severe stress : 76-100%

Part III -5- Point Likert scale on coping behaviours

The positive responses were scored one to five (Never-1, Seldom-2, Sometimes-3,Often-4, Always-5) and negative responses were scored in the reverse order. Maximum obtainable score is 250 and minimum score is 50. As the score increases, the level of coping will also increase and the final scores were interpreted as follows

- 1-25% -poor coping.
- 26-50% -moderate coping.
- 51- 75%-good coping.
- 76-100%-excellent coping.

Part IV -Teaching Module:

PART IV: Teaching module was on coping strategies to cope up with the stress. It consists of teaching programme regarding selected coping strategies on time management, positive thinking, problem solving and decision making, relaxation and ventilation to cope with stressors of day today life.

The areas covered were as follows.

- Introduction
- Definition of stress and coping
- Adaptive and maladaptive ways of coping

- orientation to time management
- Benefits of positive thinking and way of controlling negative self talk
- Teaching methods of problem solving and taking right decisions
- Explaining different ways of relaxation and ventilation
- Summarization and clarification of doubts

The steps involved in the teaching module were:

- Formulation of objectives
- Literature review
- Preparation of first draft of the teaching module
- Development of criteria check list for validatition
- Content validation of the teaching module
- Refining the draft of the teaching module
- Finalizing the draft of the teaching module

The first draft of the teaching module was developed after retrieval of literature from different sources and consulting with the experts. The content of the subject was made very simple, clear and comprehensive keeping in view of the learner's capacity to comprehend the information.

Further, the criteria checklist was developed to evaluate the lesson plan based on the criteria stated. The criteria checklist consisted of headings such as objectives, content and its organization, language, practicability, feasibility, figures and any other suggestions. There were two response columns against each objectives in the plan- namely, 'agree' and 'disagree' along with a column for remarks and suggestions of the evaluator. The evaluator was asked to put '√' against above mentioned columns.

3.10.b) Validity and reliability

Validity:

The content validity of the instrument was evaluated by a panel of fifteen experts and it was determined as follows:

- The prepared tool (Part I, Part II and Part III) along with objectives, hypotheses, operational definitions, blueprint and criteria checklist were given to experts and requested to give their valuable suggestions regarding accuracy, relevance and appropriateness of the content. There were two response columns against each item in the questionnaires-namely, 'agree' and 'disagree' along with a column for remarks and suggestions of the evaluator. The evaluator was asked to put '√ ' against above mentioned columns. The validated tool was received from the 15 judges in the field of Nursing, Medicine, clinical psychology, Education and Bio-Statistics with their valuable opinion.
- The content validity of the instruments (Part I, Part II and Part III) was checked by a 15- member panel of experts. It was refined and modified according to their recommendations and suggestions.
- In regard to content validity of the Teaching Module, lesson plan on stress and coping stratergies was given to the 15 experts along with the blue print, objectives of the study, and evaluation criteria check list. The validated tool was received from the 15 judges in the field of Nursing, clinical psychology, Medicine, Education and Bio-Statistics with their valuable opinions. The suggestions were incorporated and a modification was done in the wordings of a few items and the final draft of the teaching module was prepared.

- **Reliability:**

The reliability of the instrument was established by administering the instrument to 78 I year B.Sc. degree student nurses from both the control and interventional groups during the pilot study. The reliability of these instruments were tested and presented as follows:

- Reliability of the 5 point likert scale on stress (Part II) was This tool reliability was tested by by internal consistency**.** The internal consistency test was tested by Cronbach-Alpa. The reliability was $\alpha = > 0.75$. It shows statistically significant and thus reliable
- Reliability of the 5- Point Likert scale on coping behaviours (Part III) was too tested by internal consistency**.** The internal consistency test was tested by Cronbach-Alpa. The reliability was. $\alpha = > 0.78$ It shows statistically significant and thus reliable.

3.11. Pilot Study

The pilot study was completed between the months of January – Feb 2011. It was carried out in two Nursing colleges The Sample was about 78 student nurses (i.e. 39 in control and 39 in experimental).

The pilot study was carried out in two institutions namely CSI Jeyaraj Annapackiam College of Nursing and RASS Academy College of Nursing, in which the first one was an interventional group and the other one was a control group. The total sample size was 78, in which 39 were interventional group and 39 were in control group. After obtaining letters seeking permission from the heads of the institutions to conduct the pilot study and schedule was prepared for data collection. By using purposive sampling technique, all the 78 samples were included in the study. A brief introduction about the study was given to the students followed by the detailed

explanation about the stress and its ill-effects followed by the coping strategies and purposes of the study and expectation from the subjects.

The results revealed that the post-test score ('t'= 6.739) was higher than the pre-test score ('t'= 5.93). So it is confirmed that the main study is would be feasible.

3.12. Method of data collection

In this study, the total duration of data collection process was one year. It was carried out from the 1st week of Jan 2011 to the last week of Dec 2011. The researcher obtained prior formal written consent from six Nursing institutions, by explaining the importance of this study to all the heads of institutions. Six institutions equally divided into two halves as interventional and control group considering ethical aspects. Samples were selected by using purposive sampling. A brief introduction about the study was given to the students followed by the detailed explanation about the stress and its ill effects followed by the coping strategies and purposes of the study and expectation from the subjects of the programme. The informed consent was obtained from the subjects after explaining the purpose of this study. The following figure depicts the institution, period, and activities of the data collection in the interventional and control group.

Table 3.12. Data collection process in Interventional Group:

INSTITUTION	PERIOD	ACTIVITIES
CSI.JEYARAJ ANNAPACKIAM CON, MADURAI	March 2011	--Day -1 Pre-test followed by orientation on coping strategies -- Post-test assessment was done on the 7 th and37th day
SRI NIDHI CON, MADURAI	April 2011	--Day -1 Pre-test followed by orientation on coping strategies -- Post-test assessment was done on the 7 th and37th day
SURAN CON, RAJAPALAYAM	May 2011	--Day -1 Pre-test followed by orientation on coping strategies -- Post-test assessment was done on the 7 th and37th day

Data collection in control group:

INSTITUTION	MONTH	ACTIVITIES
SRI.RAMACHANDRA NAIDU CON , SANKARAN KOIL	Sep 2011	--Day -1 Pre-test and no orientation on coping strategies - Post-test assessment was done on the 7 th $_{and}$37th day
ANNAI DORA CON, ANDIPATTI	Oct 2011	Day -1 Pre-test and no orientation on coping strategies - Post-test assessment was done on the 7 th $_{and}$37th day
KEERAITAMILSELVAN CON, PUDUKOTTAI	Nov 2011	-- Day -1 Pre-test and no orientation on coping strategies - Post-test assessment was done on the 7 th $_{and}$37th day

Data collection process is as follows:

The data collection was done separately in the experimental and control group from the selected nursing institutions respectively. The total data collection process was carried out into two phases as follows.

(1) First phase:

It includes the administration of pre-test to control interventional group. The teaching programme was given to interventional group alone for 7 days subsequently as follows.

Session One

First, group members introduce themselves to each other. The researcher provided information about the program content, and time-schedule of the program. In the first session, group members were asked to state their goals/reasons for

attending this group and their expectations from the group. Later, power-point presentation and video clippings were shown to the participants. Before the presentation, each participant was asked to give their own definitions of stress and how they felt and in which part of the body they noticed the tension. Power-point presentations included an outline of the presentation, definition of stress, stress reactions, physiological reactions to stress which can be noticed, and which cannot be noticed, immediate/useful and chronic/ damaging stress reactions, physiological reactions that take place, information gathering for managing stress. At the end of the session, they were asked to write their ways of coping in stressful situations as a homework assignment.

Session Two

First of all, homework assignments were checked and they were appreciated for completing their assignments. If any of the group members did not complete their homework, they were asked to do the assignment verbally. Then, their ways of coping were discussed in terms of their effectiveness; either they were found as effective or ineffective. After the distinction was made between effective and ineffective ways of coping, Familiarity with adaptive and maladaptive coping was presented with power point. The researcher explained the physiology of stress, the fight or flight response that was mentioned in the previous session including descriptions of sympathetic and parasympathetic nervous systems and hormonal changes that occur during a stress response. At the end of the session, homework was given to the participants that they can practise adaptive coping at home. It was also emphasized that the more they practise the more they would see the benefit of this technique

Session Three

After reviewing, the previous class time management was presented. They were asked whether they have difficulty in managing their time, and the problems they face with. They all said that they do not have enough time to do the things that they wanted. Then a list of activity hours per week was given to them. With that list, they noticed that they would still have extra hours even after spending time for leisure activities. They were also given weekly schedule form on which they could first identify then list their priorities, avoiding too much detail in their schedule. Some basic rules for making an effective study schedule were also mentioned.

Session four

At the beginning of the session, participants were asked how many of them had planned for time management. One or two group members stated that they did not have any time to practice. The importance of completion of homework assignment was reemphasized. This session was about positive thinking. The slide show began with the presentation of some pictures as examples of perception, what we see is what we perceive .Beginning with a visual perception example, how thoughts affect reactions were explained and the importance of appraisal was mentioned. Contemporary stress research emphasizes the importance of psychological appraisal of potential stressful event, suggesting that the stress is not built-in to the life change, but depends on a large extent on the way that the person who experiences them, perceives such changes .video clippings on people who come up in their lives and reached high altitudes after crossing stumbling blocks in their lives was also shown . After that, the concept of negative thoughts was presented to the participants

Session five

This session was about problem-solving in which information and techniques were provided to help tackle the practical problems. First of all, each participant was asked to define what he or she saw as a problem. In a way, they formed a list of problems. The main aim of this session is not to eliminate problems in our life, rather how to tackle them one by one, not with all of them at the same time. Again, emphasis was made on the appraisal part of the difficulties that individuals face with in their life. Then, seven steps of problem-solving were presented with examples to participants. The first step is to identify and clearly define the problem as precisely as possible. Second step is brainstorming. It is important to step back from the problem and see the possible solutions. The more the solutions generated, the more likely it is that a good one will emerge. The third step is to write down and assess how effective and practical each potential solution was. Then the fourth step is to choose one of the solutions. Next step is planning the steps needed to carry out.

There were some questions that had to be asked about the planned solution, such as "is the planned solution realistic, practical, and achievable?" The sixth step is carrying out the plan and finally reviewing the outcome. These steps were presented on a case example and then, participants were asked whether they would like to share one of their problems. But, because of time limitation only one example could be discussed in details during the session. At the end of the session, sheets about the definitions of seven steps of problem solving were given to participants. Therefore, they could write down their problems and if they would face any difficulty in any step that could be discussed in the next session.

Session Six At the beginning of the session, the previously learnt topic was reviewed and explained about different ways of relaxation and ventilation .Relaxation

involves going for a walk spending time in nature, calling a good friend. Take a long bath, Listen to music. Watch a comedy, Sweat out tension with a good workout. etc. and ventilation involves expressing feelings instead of bottling them up. If something or someone is bothering you, communicate your concerns in an open and respectful way. If you don't voice your feelings, resentment will build and the situation will likely remain the same.

Session Seven

The last session includes Summarization and clarification of doubts

GROUP	DAY 1	DAY 2	DAY-3	DAY-4	DAY-5	DAY-6	DAY-7
	Session1	**Session2**	**Session3**	**Session4**	**Session5**	**Session6**	**Session7**
Interventional	Introduct-ion on stress and its ill effects	Familiarity with adaptive and maladaptive coping	orientation to time management	Benefits of positive thinking and way of controlling negative self talk	Teaching methods of problem solving and taking right decisions	Explaining different ways of relaxation and ventilation	Summariz-ation and clarifica-tion of doubts
Duration	**1 hr**	**1 hr**	**1 hr**	**1 hr**	**1 hr**	**1 hr**	**1 hr**

(2) Second phase:

The first post-test assessment was done at the end of the teaching (i.e. on the $7^{th)}$ to the interventional group and same assessment was done to the control group too. Followed by second post-test assessment was performed on 37^{th} day to evaluate the two observations of stress level and coping behaviours among student nurses. The brief review of teaching was given to interventional group before the second post-test assessment.

PHASE –II is given as follows.

GROUP	Session 1 (DAY -7)	Session 2 (DAY -37)
Interventional	Post-test -1	Post-test -2
Control	Post-test -1	Post-test -2

In the interventional group:

During the first post-test assessment period, the coping strategies was revised to the subjects in the interventional group in order to improve the mastery of knowledge and to clarify their doubts .Followed by the first post-test assessment period, the concepts were reviewed daily and the second post-test assessment period was done after one month of first post test assessment

In control group:

Whereas, students in the control group were asked to make markings in the stress and coping scale. Considering ethical aspects, teaching was also given to this group after post –test.

3.13. Plan for data analysis

The data were analyzed in terms of objectives of this study using descriptive and inferential statistics. The plan for data analysis is as follows:

- Organization of data in master sheet / computer
- Demographic variables analyzed in terms of frequency and percentage.
- Pre- test and post-test stress and coping behaviours analyzed by mean and Standard Deviation
- The paired ‘t’ test was used to find the difference in mean scores before and after coping strategies both within the control and interventional group.

- Pearson correlation coefficient (r) was used to find the relationship between stress and coping of student nurses.

3.14. Ethical consideration

Beneficence/Non-Malfeasance:

- Assurance was given to subjects that their participation in the study will in no way influence their results within their course of study or their student status.
- Though this study is an experimental design, the intervention used was non-invasive.
- Based on ethical consideration, intervention was also given to control group at the end of data collection procedure.

Confidentiality:

- Only Self-administered questionnaires were administered to potentially protect the anonymity and privacy of the respondents contributing to the confidentially of the responses

Respect for human dignity:

- Participants were advised of the voluntary nature of the study and given the option to withdraw from the study at any stage without being subjected to any penalty.
- Participants were not required to identify themselves by name and have not been identified during data analysis or during discussion of the results and conclusions.
- Full explanation of the purpose of the research was given and the researcher was available to provide information and support as needed.

- And they were informed about data collected from questionnaires and then stored in computer discs for final analysis will be kept in a secure place and shredded after the study has been completed.

Justice:

- Research proposal was approved by the screening committee of The Tamil Nadu Dr. M.G.R Medical University, Chennai, and Tamil Nadu.
- Ethical clearance was obtained from the ethical committee of the study centre.
- Prior permission was sought from higher authorities in concerned institution before commencing the study. Before consent is sought the researcher has given details of the nature and purpose of the research, and the proposed outcome of the research.
- The informed consent was formally obtained prior to completion of the data collection from the participants and the confidentiality of their responses was assured

CHAPTER IV

RESULTS AND INTERPRETATION

In this present study, this chapter deals with the analysis and interpretation of collected data from 245 I year B.Sc., Student nurses who fulfilled the inclusion criteria from selected nursing institutions in and around Madurai, Tamil Nadu. The present study is designed to assess the effectiveness of selected coping strategies among Student Nurses in selected institutions of Tamil Nadu.

The data obtained were tabulated, analyzed, and interpreted using descriptive and inferential statistics on the basis of objectives and hypotheses formulated for the purpose of this study.

The data obtained were tabulated, analyzed, and interpreted using descriptive and inferential statistics on the basis of objectives and hypotheses formulated for the purpose of this study.

Descriptive statistics were used to present the following:

- Frequency and percentages were used to present the demographic variables of student nurses as well as the level of stress and coping behaviours among student nurses during pre-test and post-test in both the groups.
- Chi-square was used to find out the association of level of stress and coping behaviours among student nurses with their selected demographic variables.

Inferential statistics were used to present the following:

- The paired 't' test was used to compare the pre-test and post-test mean scores on effectiveness of coping strategies on stress and coping behaviours among student nurses within the control as well as the interventional group.

- The unpaired 't' test was used to compare the mean score differences in effectiveness of coping strategies on stress and coping behaviours among student nurses between control and interventional groups.
- Pearson's correlation coefficient ('r') was used to find the relationship between stress and coping behaviours of student nurses in control and interventional groups.

OBJECTIVES OF THE STUDY

- To assess the pre-test level of stress and coping behaviors among Student Nurses in interventional and control groups.
- To assess the post-test level of stress and coping behaviors among Student Nurses in interventional and control groups.
- To evaluate the effectiveness of coping strategies on the level of stress and coping behaviors among Student Nurses
- To find out the relationship between the stress and coping behaviors in interventional and control groups.
- To find out the association between the stress with selected demographic variables of interventional and control groups
- To find out the association between the coping behaviors with selected demographic variables of interventional and control groups

HYPOTHESES

H_1: There is a significant difference between pre-test and post-test level of stress and coping behaviours among Student Nurses in the interventional group.

H_2: There is a significant reduction in the level of stress and increase in the level of coping behaviours among student nurses in the interventional group compared to the students in control group.

H_3: There is a significant correlation between the level of stress and coping behaviours among Student Nurses

H_4: There is a significant association between the level of stress among Student Nurses with selected demographic variables

H_5: There is a significant association between the level of coping among Student Nurses with selected demographic variables

The findings were organized and presented under the following sections**:**

Section I :

Section I presents the distribution of samples according to their demographic variables.

Section II :

This section displays the comparison between pre-test and post -test mean scores regarding effectiveness of coping strategies on stress and coping behaviors among student nurses both in control and interventional group .

a) Distribution of the subjects based on their pre-test and post-test stress level in control and interventional group

b) Distribution of the subjects based on their pre-test and post-test coping behaviors level in control and interventional group

c) Area wise distribution of mean, SD and mean percentage of pre and post-test mean scores in control and interventional group regarding level of stress of student nurses on coping strategies among student nurses

d) Area wise distribution of mean, SD and mean percentage of pre and post-test mean scores in control and interventional group regarding level coping behaviors on coping strategies among student nurses.

e) Item wise comparison of pre -post test scores for the component of level of stress among student nurses in control group

f) Item wise comparison of pre - post test scores on the component of coping behaviors among student nurses in interventional group**.**

Section III:

This section presents the effectiveness of coping strategies on the level of stress and coping behaviors of student nurses

a) Paired‘t’ -test for the comparison between control and interventional pre -post test mean scores regarding effectiveness of coping strategies on stress scores among student nurses.

b) Paired‘t’ -test for the comparison between control and interventional pre -post test mean scores regarding effectiveness of coping strategies on coping behaviors scores among student nurses.

c) Un Paired‘t’ -test for the comparison of pre –test and 2nd-post -test regarding effectiveness of coping strategies on stress among nursing students between control and interventional group.

d) Un Paired‘t’ -test for the comparison of pre –test and 2nd-post -test regarding effectiveness of coping strategies on coping behaviors among nursing students between control and interventional group

e) Analysis of variance (ANOVA) for effectiveness of coping strategies on stress and coping behaviors among student nurses

Section IV :

This section deals with the relationship between stress and coping of student nurses in both the groups.

a) Correlation between stress and coping behaviors of student nurses during pre-test as well as post- test in control group.

b) Correlation between stress and coping behaviors of student nurses during pre-test as well as post- test in interventional group

c) Multiple regression for relationship between one depended variable and more than one independent variables of student nurses both in the control and interventional group.

Section V :

This section explains the association of stress and coping behaviors of student nurses with their Demographic variables in interventional group.

a) Association between stress and Demographic variables of student nurses in control and interventional group.

b) Association between coping behaviors and Demographic variables of student nurses in control interventional group.

Section I

Section I deals with the description of the percentage wise distribution of Demographic data of 245 subjects (i.e., 119 were from interventional group and 126 were from control group respectively) and is explained in frequency and percentage**.** This is presented in Table 1 from Fig 4.1.1 to 4.1.4 respectively.

TABLE : 4.1.1

Frequency and percentage wise distribution of student nurses according to their demographic data

N=245

Demographic data	INTERVENTIONAL GROUP n=119		CONTROL GROUP n=126	
	Frequency	Percentage	Frequency	Percentage
Age:				
17	70	59	61	48
18	39	33	54	43
19	9	8	10	8
21	1	1	1	1
Sex:				
Male	18	15	7	6
Female	101	85	119	94
Religion:				
Hindu	110	92	108	86
Muslim	3	3	2	2
Christian	6	5	16	12
Education of mother:				
Primary	45	38	66	52
Secondary	44	37	40	32
Higher secondary	26	22	15	12
Graduate	4	3	5	4
Education of father:				
Primary	37	31	50	40
Secondary	73	61	42	33
Higher secondary	8	7	27	21
Graduate	1	1	7	6
Occupation of mother:				
House wife	107	90	100	79
Government	-	-	5	4
Private	12	10	19	15
Professional	-	-	2	2
Business	-	-	-	

Occupation of father:				
Coolie	106	89	99	78
Government	4	3	15	12
Private	5	4	6	5
Professional	-	-	2	2
Business	4	3	4	3
Place of residence:				
Urban	31	25	25	20
Rural	88	75	101	80
Order of sib-ship:				
First	73	61	60	48
Second	36	30	45	36
More than second	10	9	21	16
Higher secondary mark:				
51-60%	5	4	34	27
61-70%	52	44	33	26
71-80%	62	52	57	45
81-90%	-	-	2	2
Medium of language in schooling:				
Tamil	84	71	92	73
English	35	29	34	27
Leisure time activities:				
Reading Books	36	30	21	17
Watching TV	29	24	29	23
Listening Music	23	19	46	36
Drawing	8	7	15	12
Any other (gardening)	16	13	9	7
Reading Books & Watching TV	1	1	1	1
Watching TV & Listening Music	5	4	4	3
Reading Books & Watching TV & Listening Music	1	1	1	1
Type of sociability				
Do not mingle with others	4	3	14	11
Mingle with selective people	33	28	25	20
Mingle with everyone	33	28	60	48
Sometimes mingle and other time may not mingle	49	41	27	21
	-	-	-	-
Social Activities:				
NSS	73	61	65	52
SNA	36	30	51	40
Any other (health awareness programme)	10	9	10	8

1. Age (in years)

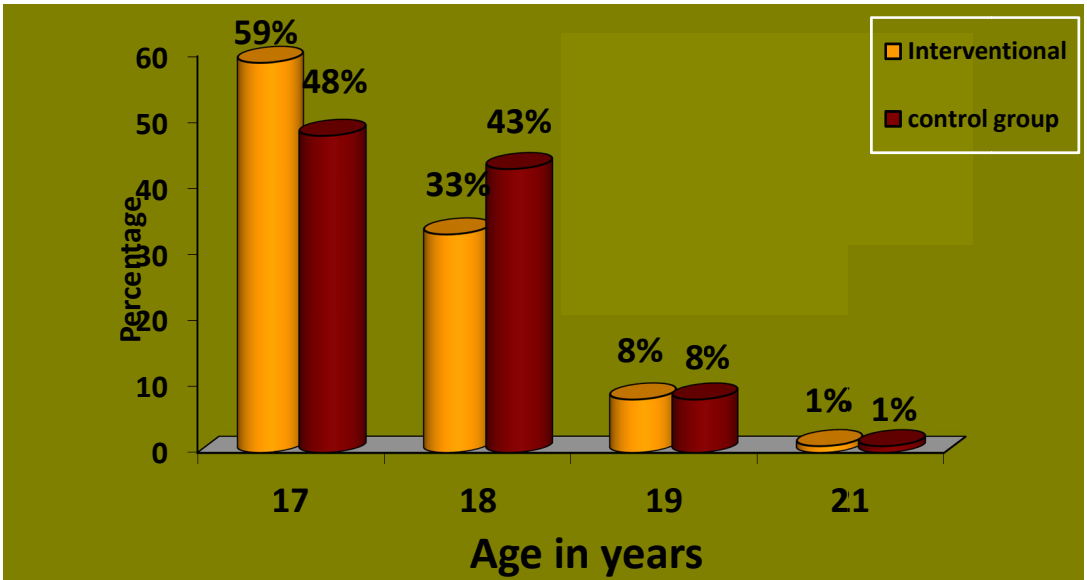

Fig. 4.1.1. Multiple bar diagram showing percentage wise distributions of Student nurses based on their Age

Fig. 4.1.1 depicts the frequency and percentage wise distribution of student nurses based on their age among interventional and control group.

Regarding the age of student nurses, highest percentage 70(59%) in the interventional and 61(48%) and control were in the age of 17 years. 39 (33%) and 54(43%) from both the groups fall in the age group of 18 years and least 1(1%) from both the groups belong to the age group of 21 years.

2. Gender

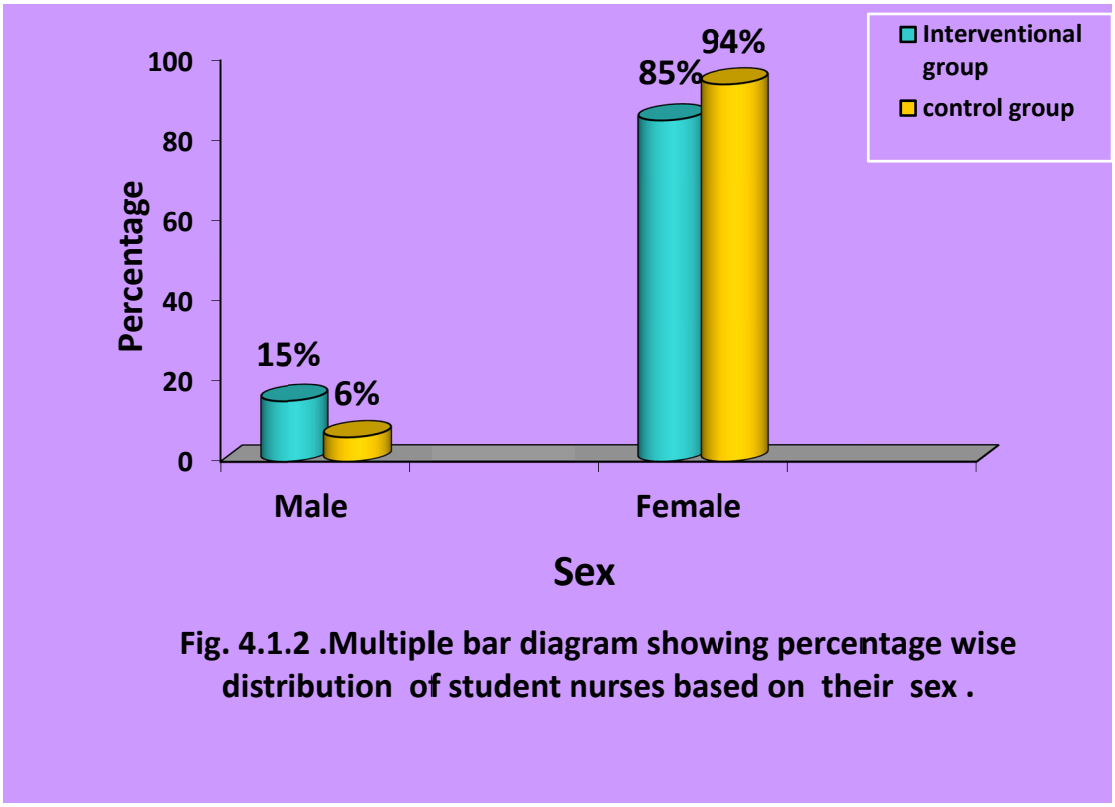

Fig. 4.1.2 .Multiple bar diagram showing percentage wise distribution of student nurses based on their sex .

Fig. 4.1.2 depicts the frequency and percentage wise distribution of student nurses based on their sex among interventional and control group.

In context of gender, majority of them, 101(85%) and 119(94%) from both the groups were females and only 18(15%) from interventional group and 7(6%) from the control group were males.

Thus, it can be interpreted that majority of the students in two groups were women because women mostly like this nursing profession than men.

3. Religion

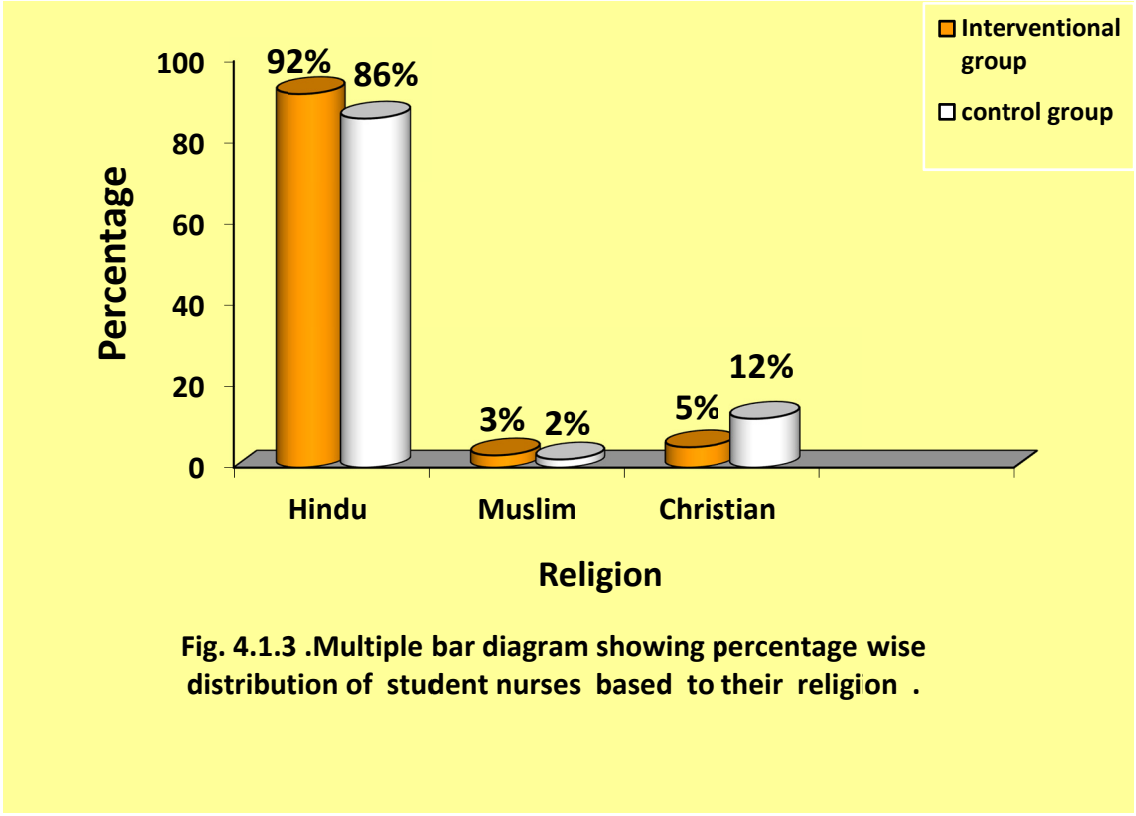

Fig. 4.1.3 .Multiple bar diagram showing percentage wise distribution of student nurses based to their religion .

Fig. 4.1.3 depicts the frequency and percentage wise distribution of student nurses based on their Religion among interventional and control group.

With regard to the religion, majority of them from both the groups, i.e.) 110(92%) and 108(86%) belong to Hindu religion and minimum subjects 3(3%) from interventional group and 2(2%) from control group belongs to Muslim religion.

4. Education of mother

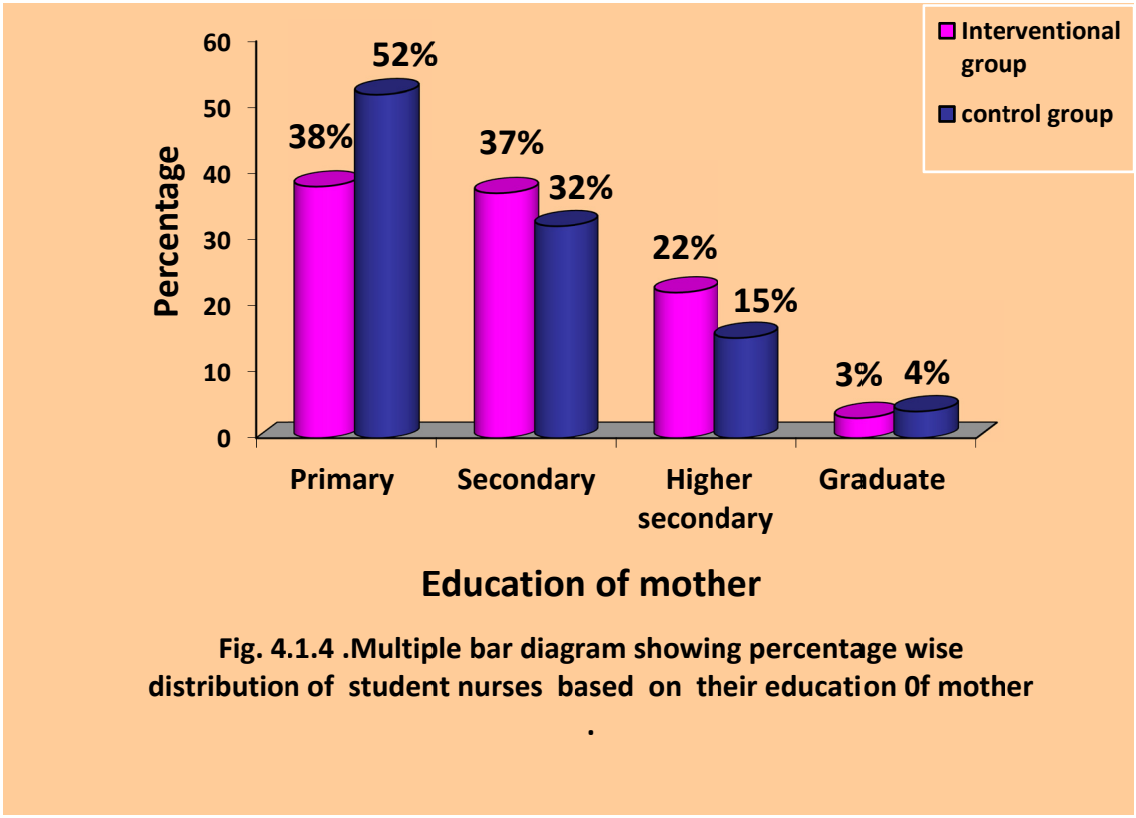

Fig. 4.1.4 .Multiple bar diagram showing percentage wise distribution of student nurses based on their education 0f mother .

Fig. 4.1.4 depicts the frequency and percentage wise distribution of student nurses based on the education of mother among interventional and control group.

While seeing the education of mother, majority of them i.e.) 37(31%) from the interventional group completed their secondary level of education and 50(40%) from the control group completed their primary level of education and least number of samples 1(1%) and 7(6%) from both the groups finished their graduate level of education.

5. Education of father

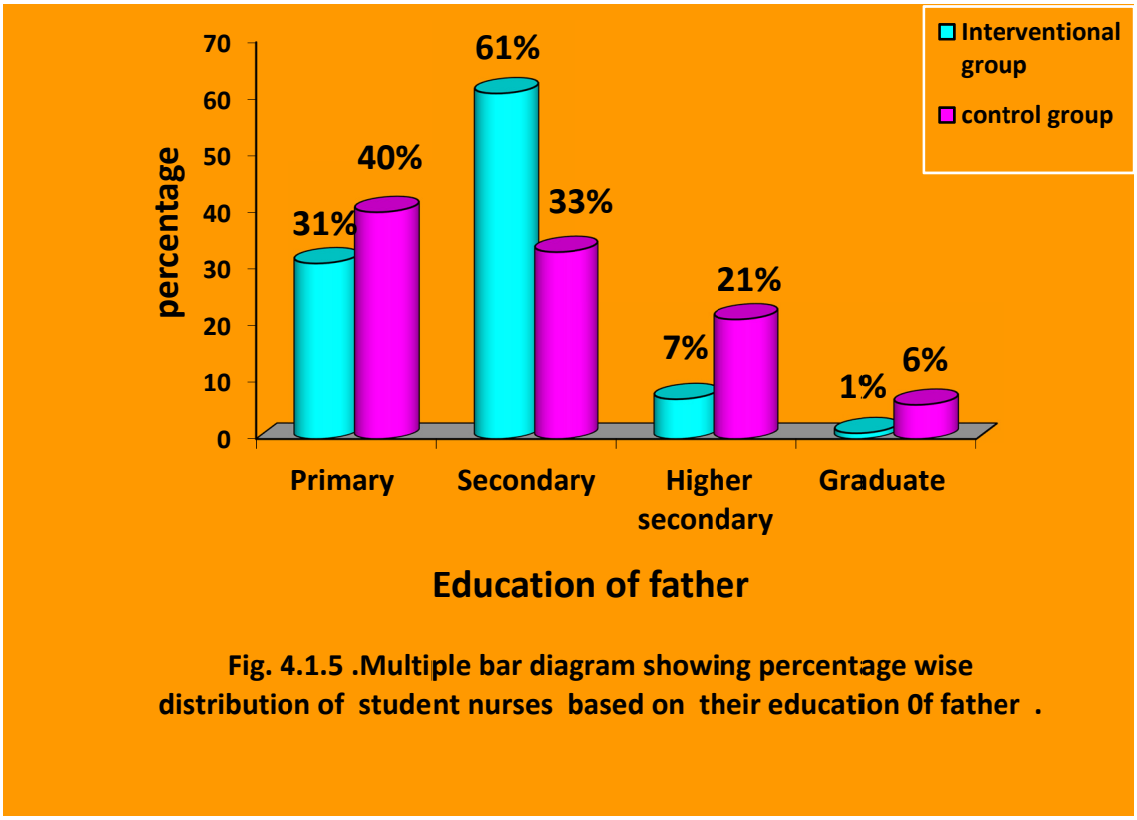

Fig. 4.1.5 .Multiple bar diagram showing percentage wise distribution of student nurses based on their education 0f father .

Fig. 4.1.5 depicts the frequency and percentage wise distribution of student nurses based on the education of father among interventional and control group.

With regard to the education of father, maximum subjects from interventional group i.e.) 73(61%) have completed their secondary level of education and from the control group, 50(40%) have completed their primary level of education. Only very few members 1(1%) and 7(6%) from the former and later group have completed their graduate level.

6. Occupation of mother

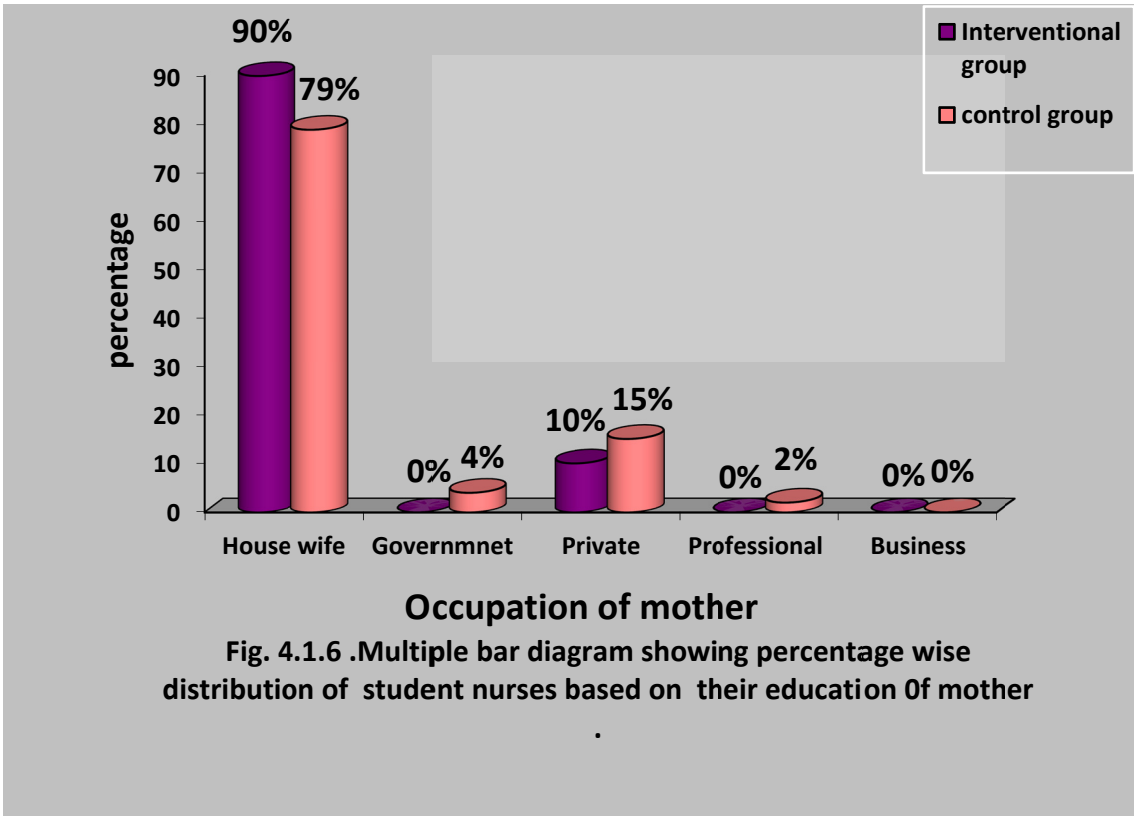

Fig. 4.1.6 .Multiple bar diagram showing percentage wise distribution of student nurses based on their education 0f mother

.

Fig. 4.1.6 depicts the frequency and percentage wise distribution of student nurses based on the occupation of mother among interventional and control group.

While portraying the occupation of mother, 107(90%) from the interventional group followed by 12(10%) of them were doing private job. Analyzing the occupation of mother, 100(79%) from the control group were housewives and only a few subjects 2(2%) were professionals.

7. Occupation of father

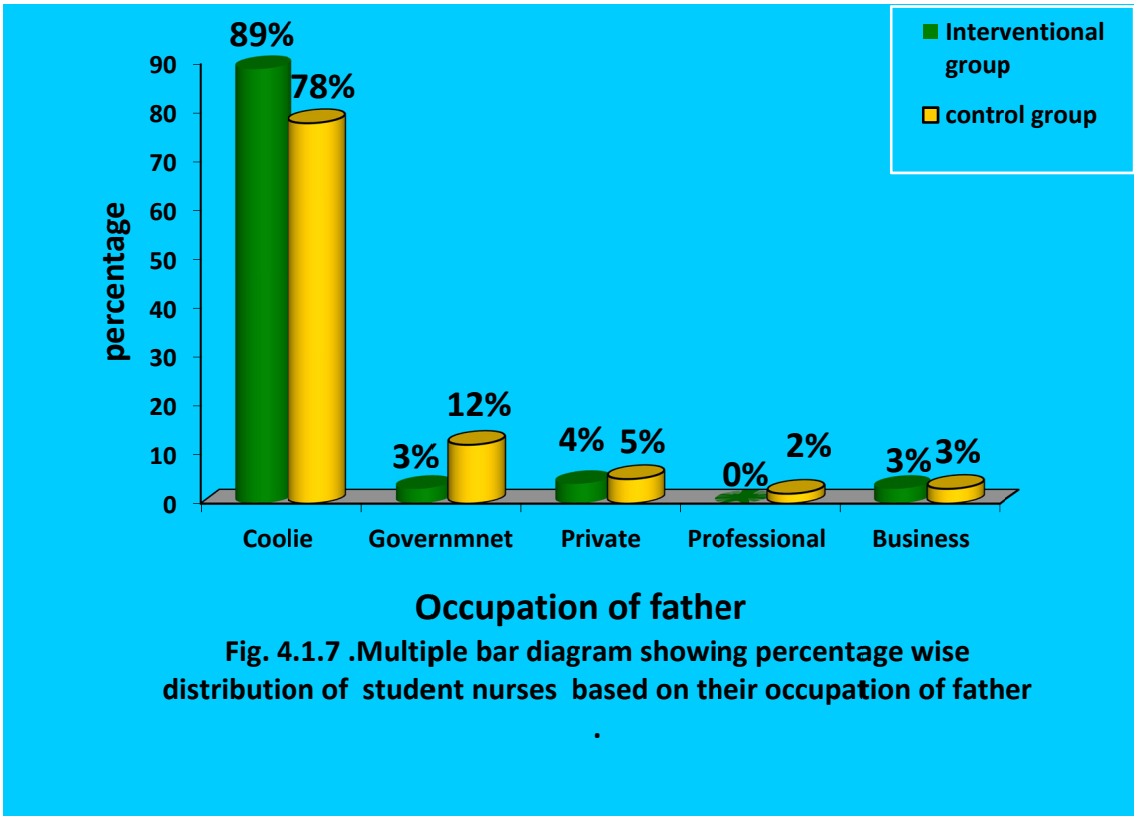

Fig. 4.1.7 .Multiple bar diagram showing percentage wise distribution of student nurses based on their occupation of father

.

Fig. 4.1.7 depicts the frequency and percentage wise distribution of student nurses based on the occupation of father among interventional and control group.

With regard to the occupation of father, majority 106(89%) from the interventional group and 99(78%) from the control group were coolie workers. In the interventional group minimum subjects of 4(3%) were doing business and in the control group 2(2%) were professionals.

8. Place of residence

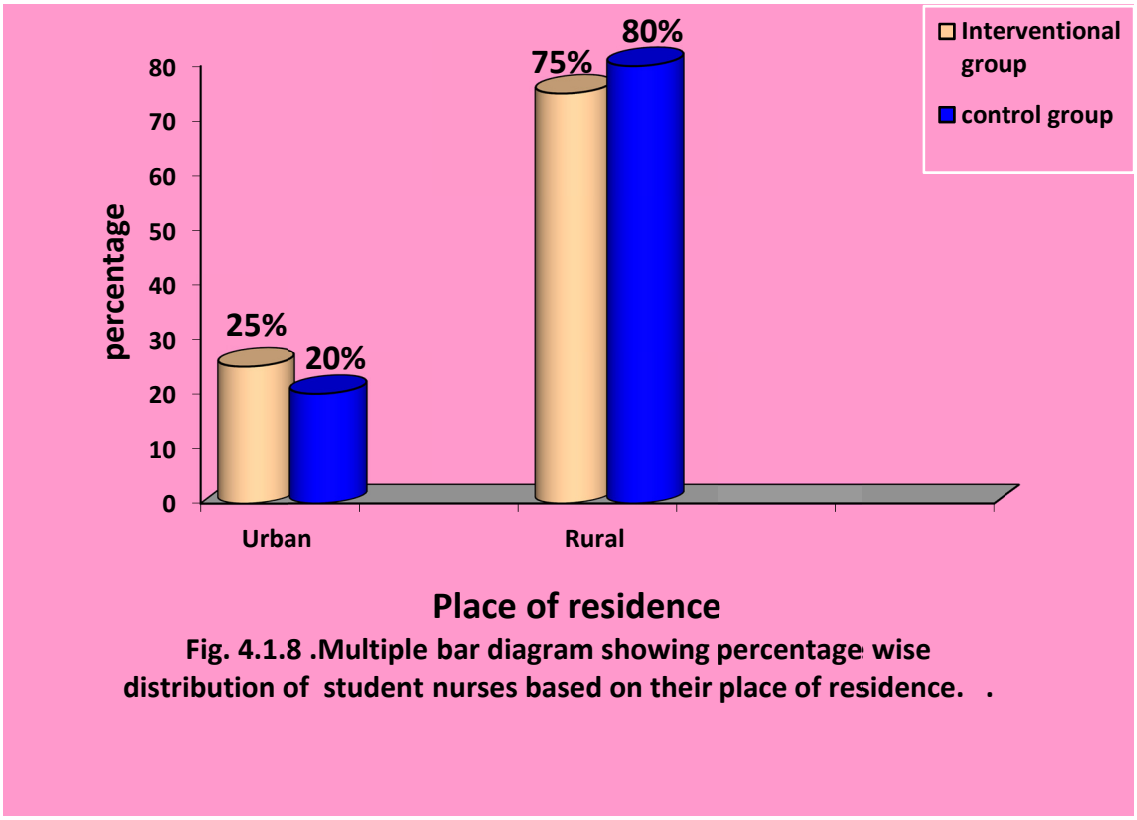

Fig. 4.1.8 .Multiple bar diagram showing percentage wise distribution of student nurses based on their place of residence. .

Fig. 4.1.8 depicts the frequency and percentage wise distribution of student nurses based on the place of residence among interventional and control group.

While seeing the place of residence in the interventional group, 88(75%) belongs to the rural background followed by 31(25%) belongs to the rural background. Likewise in the control group, majority of them 101(80%) belongs to the rural background followed by 25(20%) of them belongs to the urban background.

9. Order of sib-ship

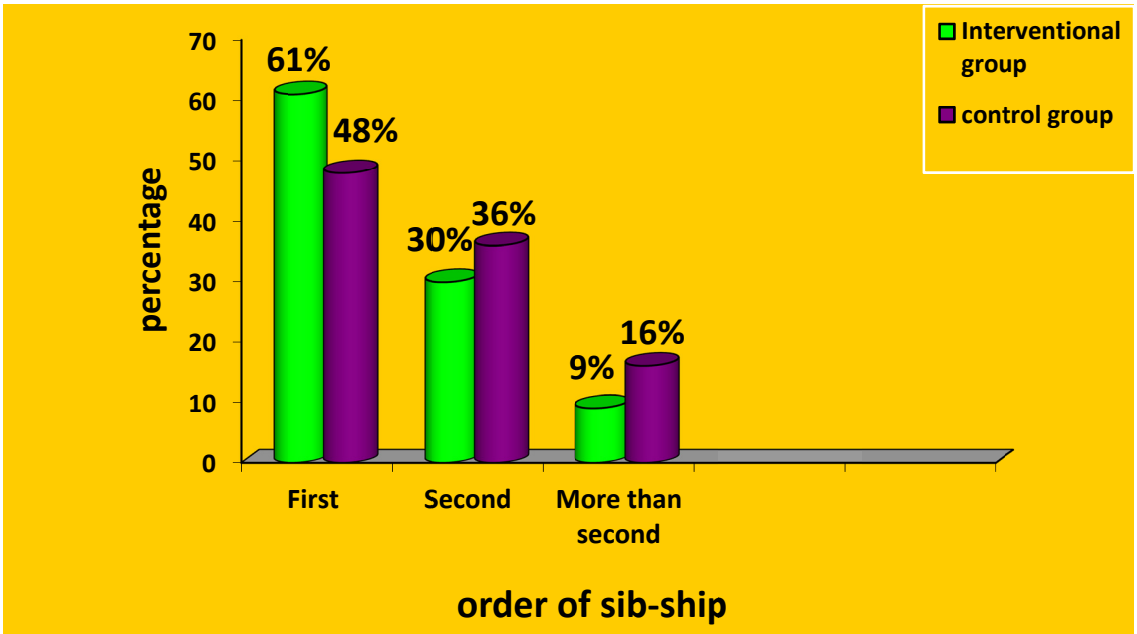

Fig. 4.1.9 .Multiple bar diagram showing percentage wise distribution of student nurses based on their order of sib-ship .

Fig. 4.1.9. depicts the frequency and percentage wise distribution of student nurses based on the order of sib-ship among interventional and control group.

With regard to the order of sib-ship, majority 73(61%) from the interventional group and 60(48%) from the control group were the first ones in their family followed by least number of subjects, 10(9%) in the interventional group and 21(16%) from the control group were the third ones in their family.

10. Higher Secondary Marks

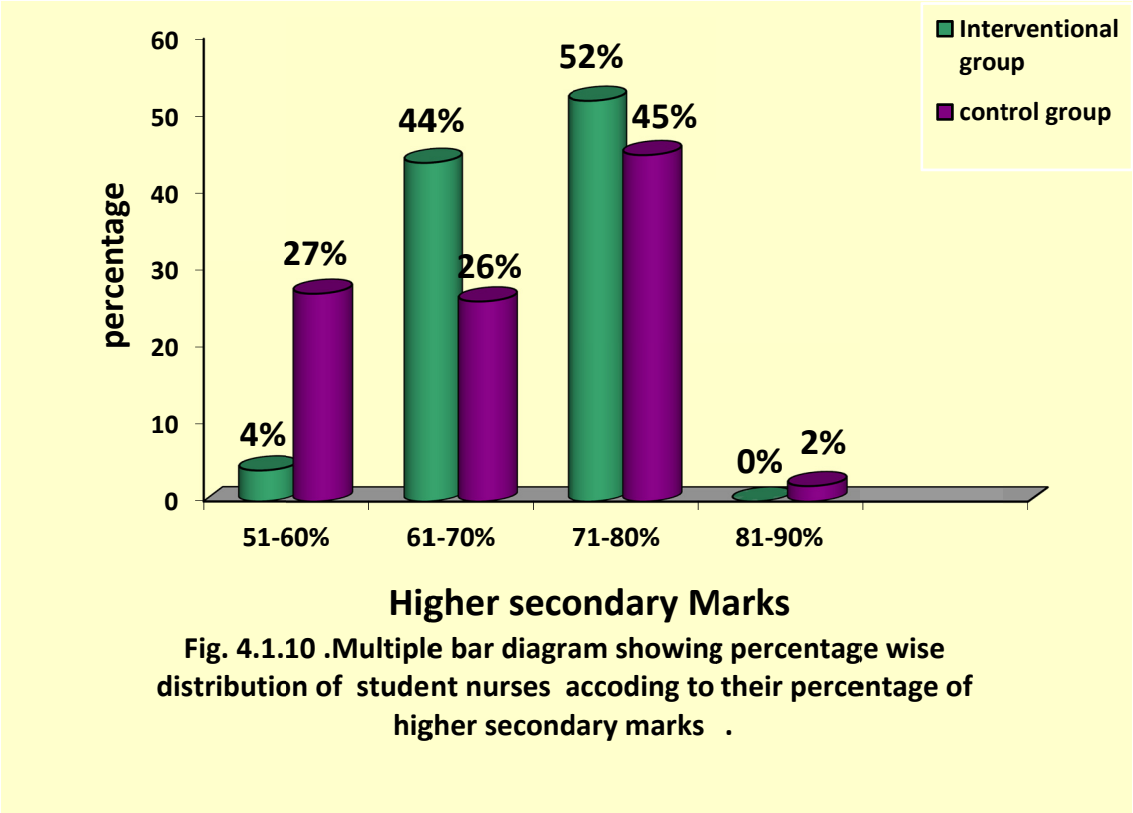

Fig. 4.1.10 .Multiple bar diagram showing percentage wise distribution of student nurses accoding to their percentage of higher secondary marks .

Fig. 4.1.10. depicts the frequency and percentage wise distribution of student nurses based on the higher secondary marks among interventional and control group.

While seeing the marks obtained in Higher Secondary, majority of them from the interventional group and control group i.e.) 62(52%) and 57(45%) have obtained 71-80% of marks. Only few samples, 5(4%) from the interventional group have obtained 51-60% of marks the and only 2(2%) have obtained 81-90% of marks from the control group.

11. Medium of language in school

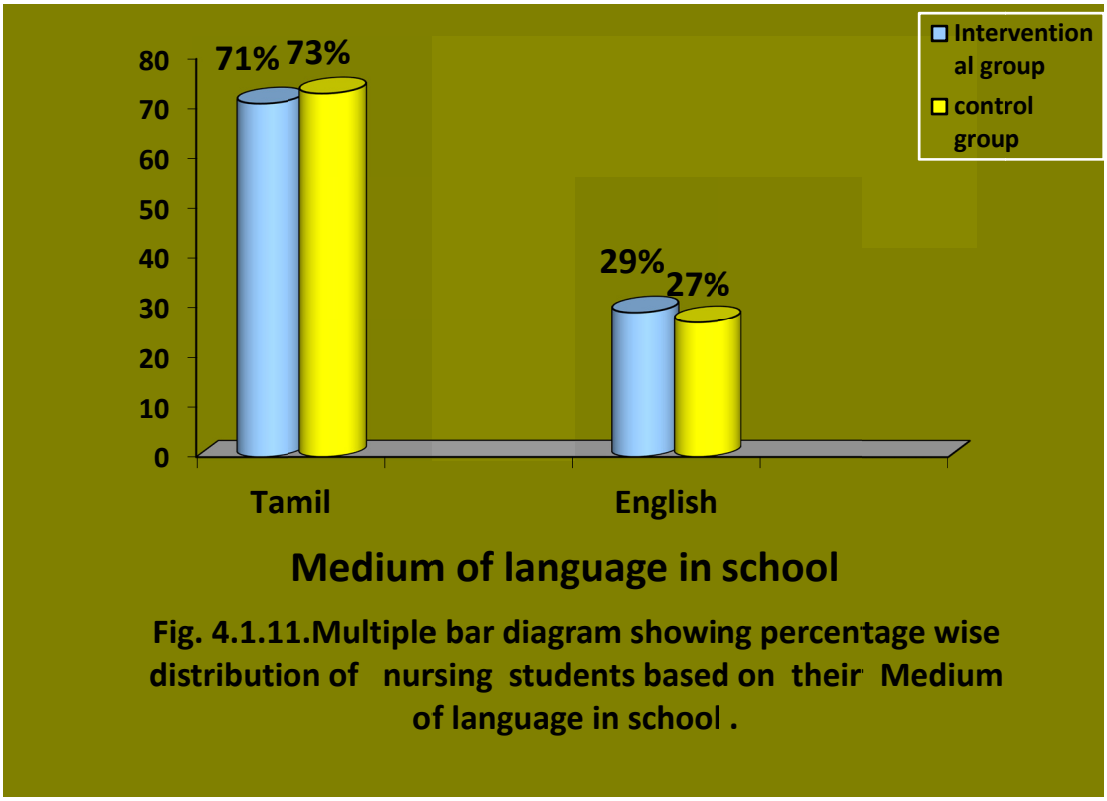

Fig. 4.1.11.Multiple bar diagram showing percentage wise distribution of nursing students based on their Medium of language in school .

Fig. 4.1.11.depicts the frequency and percentage wise distribution of student nurses based on the medium of language among interventional and control group.

While seeing the medium of language, majority of them from the interventional group and control group, i.e.) 84 (71%) and 92(73%) have studied in Tamil medium. Only few samples, 35 (29%) from the interventional group and, 34(27%) have hailed from Tamil medium the control group.

12. Leisure time activities

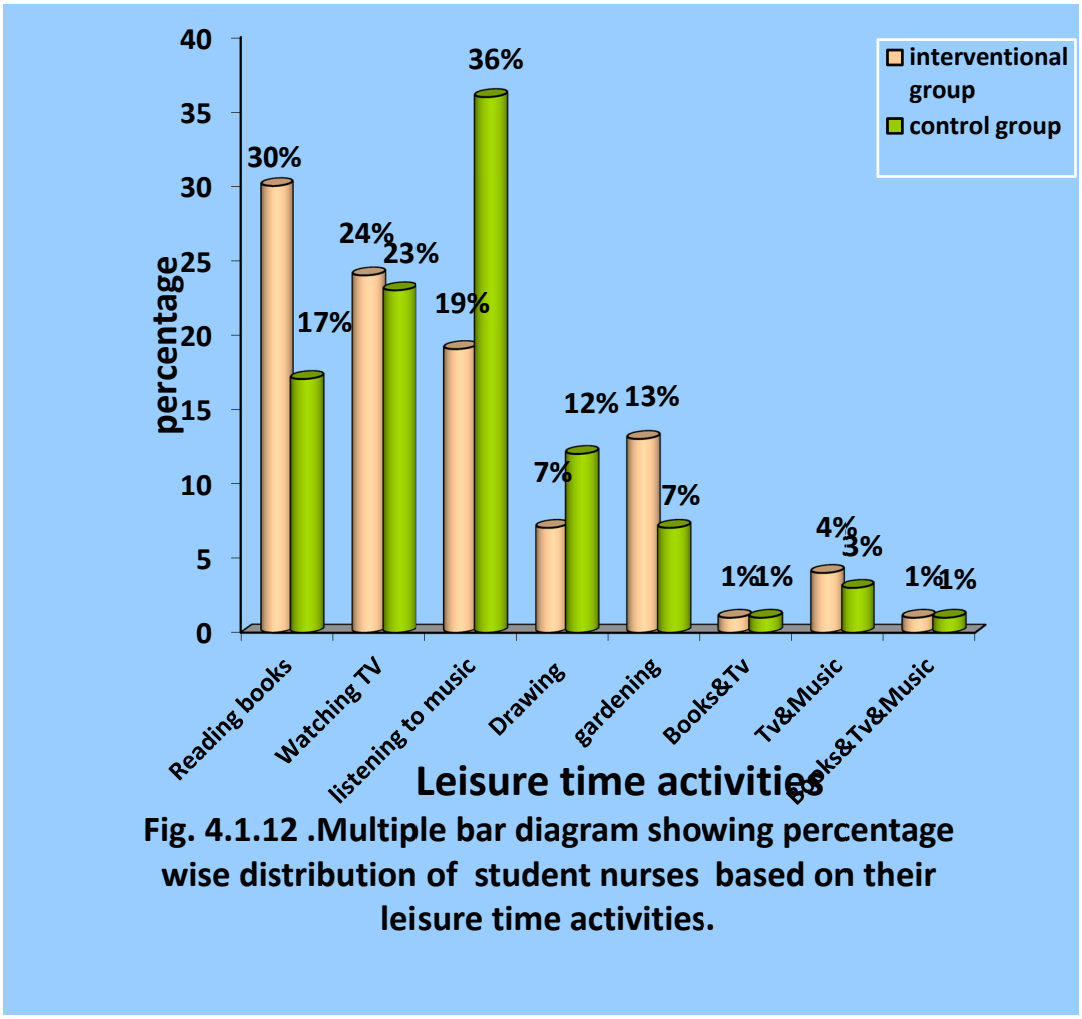

Fig. 4.1.12 .Multiple bar diagram showing percentage wise distribution of student nurses based on their leisure time activities.

Fig. 4.1.12. depicts the frequency and percentage wise distribution of student nurses based on the medium of language among interventional and control group.

While seeing the leisure time activities, majority of samples in interventional group, 36(30%) have the habit of reading books and minimum 1(1%) have the habit of reading books, watching Television and the same 1(1%) have the habit of watching television and listening to music. In the control group, 46(36%) have the habit of listening to music and least samples 1(1%) have the habit of watching television and listening to music followed by 16(13%) in the interventional group and 7(9%) in the control group spend their leisure time in gardening.

13. Type of sociability

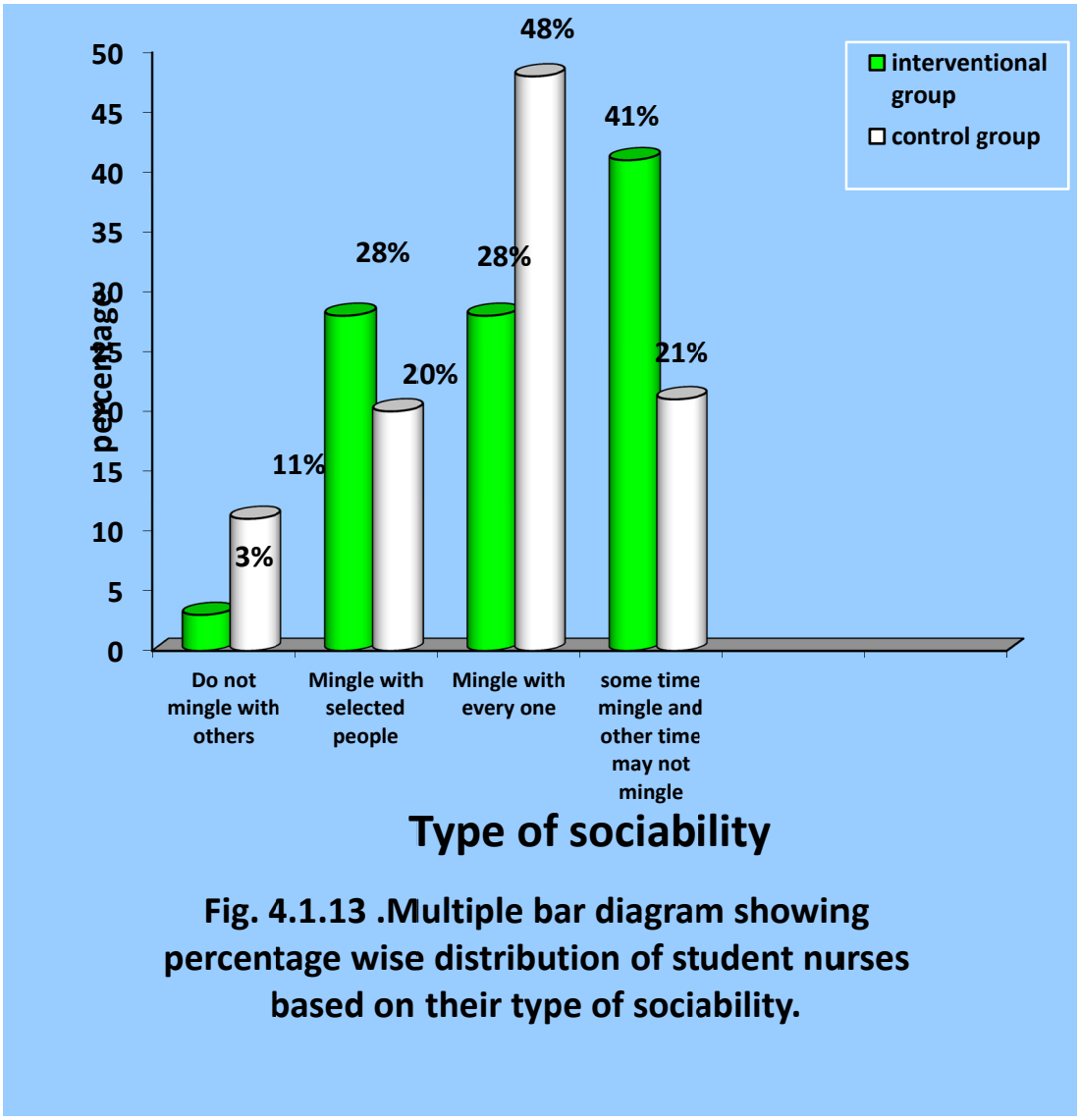

Fig. 4.1.13 .Multiple bar diagram showing percentage wise distribution of student nurses based on their type of sociability.

Fig. 4.1.13. depicts the frequency and percentage wise distribution of student nurses based on the type of sociability among interventional and control group.

Regarding the type of sociability, majority of samples in the interventional group 49(41%) sometimes mingle and other times may not mingle with others and minimum samples 4(3%) do not mingle with others. Likewise in the control group, 60(48%) mingles with others and minimum subjects, 14(11%) don't mingle with others.

14. Social activities

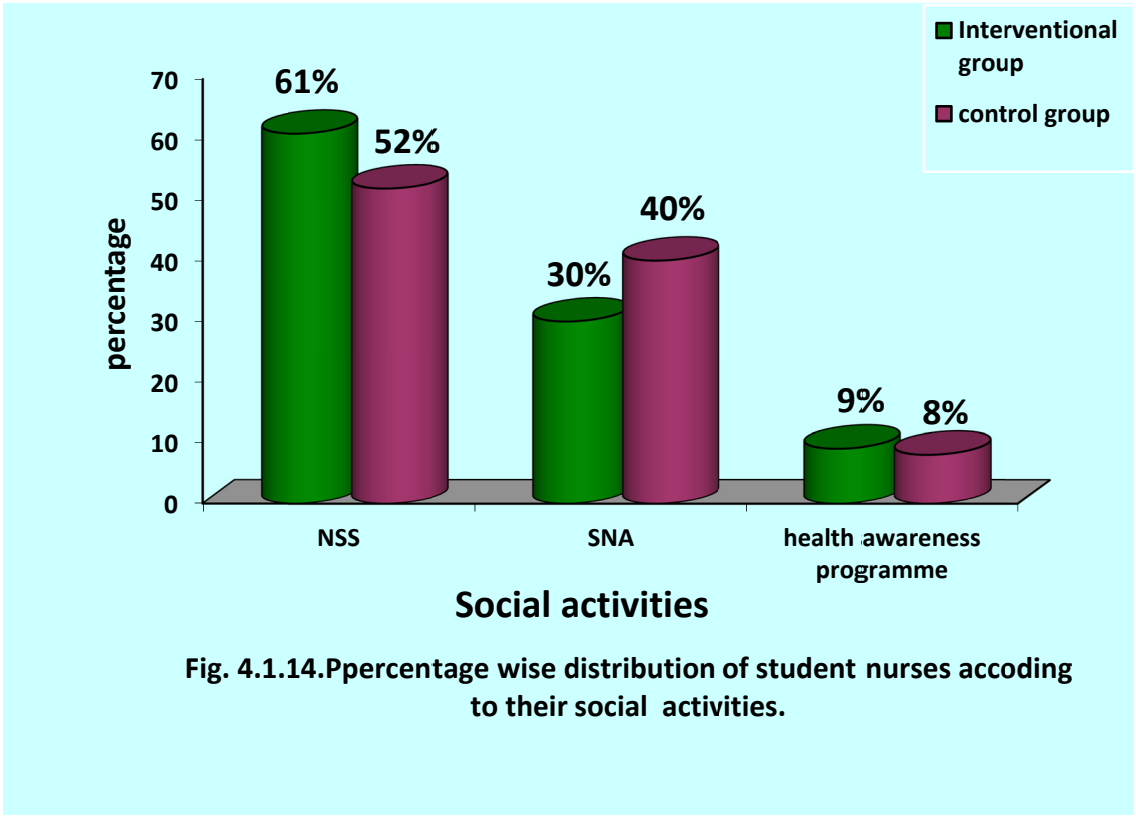

Fig. 4.1.14.Ppercentage wise distribution of student nurses accoding to their social activities.

Fig. 4.1.14. depicts the frequency and percentage wise distribution of student nurses based on the type of social activities among interventional and control group.

While seeing the involvement of students in social activities, majority of them, 73(61%) in the interventional group and 65(52%) in the control group are involved in NSS activities and very few from both the groups 10(9%) and 10(9%) were interested in health awareness programme.

Section II

This section deals with the following areas :

- Distribution of the subjects based on their pre-test and post-test stress level and coping behaviours in control and interventional group mean,
- Area wise distribution of mean, SD and mean percentage of pre and post-test mean scores in control and interventional group on the level of stress and coping behaviours among student nurses.
- Paired'-test to analyze the effectiveness between for control and interventional pre and 2nd-post-test stress and coping behaviors scores on its different components among student nurses.
- Unpaired 't'-test to analyze the effectiveness between control and interventional pre and 2nd-post-test level of stress and coping behaviors scores among student nurses on its different components.
- One way Repeated measures analysis of variance RM-ANOVA to compare the differences on the level of stress of student nurses between the control and the interventional groups at two different points of time. These findings were presented in the following tables from 4.2.1 to 4.2.40**.**

Table: 4.2.1

Distribution of subjects based on their level of stress among student nurses in the control and interventional groups

N = 245

Level of stress	Control group n-126						Interventional group n-119					
	pre test		post test-1		post test-2		pre test		post test 1		post test 2	
	f	%	f	%	f	%	f	%	f	%	f	%
Mild	-	-	-	-	-	-	-	-	-	-	-	-
Moderate	27	21	42	33	63	50	6	5	116	97	119	100
severe	99	79	84	67	63	50	111	93	3	3	-	-
Very severe	-	-	-	-	-	-	2	2	-	-	-	-

As shown in Table4.2.1, in the control pre-test, out of 126 students, none of them had very severe stress but majority 99 (79%) had severe stress and 27 (21%) had moderate stress. Likewise in interventional group, out of119 students 2 (2%) had very severe stress, 111(93%) had severe stress and 6(5%) had moderate stress 99 (79%) had had moderate stress and no one experienced mild stress. This may be due to the lack of awareness about the coping strategies to overcome stress by the student nurses.

However in interventional group, after the training all the subjects, 119(100%) experienced moderate stress and none of them had severe and very severe stress These findings proved that there is a significant decrease in the level of stress among the students who had underwent teaching on coping strategies.Therefore this result clearly proved the effectiveness of coping strategies in reducing the intensity of stress. In other words, students who received teaching on coping strategies exhibited lesser level of stress than students in the control group.

4.2.2

Distribution of subjects based on the level of coping behaviors of pre and post test among student nurses in control and interventional groups

N = 245

Level of coping	Control group n-126						Interventional group n-119					
	pre test		post-test-1		post test -2		pre test		post test 1		post test 2	
	f	%	f	%	f	%	f	%	f	%	f	%
Low	-	-	-	-	-	-	-	-	-	-	-	-
Moderate	9	7	20	16	14	11	5	4	-	-	-	-
Good	117	93	106	84	108	86	114	96	119	100	117	98
Excellent	-	-	-	-	4	3	-	-	-	-	2	2

Table 4.2.2: depicts pre and post-test level of coping behaviors in control and Interventional group among student nurses.

The result reveals that in control group, in pre-test that 9(7%) had moderate, and 117(93%) had good coping and 4(3%) coped excellently and in the post-test 14(11%) coped moderately, 108, (86%) had good coping and 4(3%) coped excellently since majority of the samples mingles with everyone and might share their feelings which is an effective coping technique.

However in interventional group, in pre-test that 5(4%) had moderate coping, 114(96%) had good coping and 2(2%) coped excellently and in the post-test 117(98%) had good coping and 4(3%) coped excellently which shows an improvement in the post test Thus higher the level of coping proves the effectiveness of teaching on coping strategies among student nurses.

Table No.4.2.3

Area wise distribution of mean, SD and mean percentage of pre-test and 2nd post test scores of stress among student nurses in control group.

n = 126

Level of stress	Max Score	Control-Pre test scores			Control-2nd Post test scores			Difference in mean %
		Mean	SD	Mean %	Mean	SD	Mean %	
Academic stressors	60	37.13	7.55	62	35.75	9.29	60	2
Time balance stressors	30	18.04	3.99	60	17.76	5.01	59	1
Interpersonal stressors	35	20.21	5.49	68	19.49	6.22	56	2
Intrapersonal stressors	75	37.77	9.84	50	35.93	8.15	48	2
Family stressors	20	8.28	3.29	41	8.51	3.42	43	2
Environmental stressors	30	14.46	4.57	48	14.19	4.55	47	1
Overall	250	133.9	24.4	54	131.6	28.3	53	1

Data in Table 4.2.3 shows the area wise distribution of mean, SD and mean percentage of control pre-test and 2nd post test scores which reveals that overall 1% of difference in the mean score (133.9±24.4and 131.6±28.3) in all the aspects of level of stress.

Only 2% difference in the areas of 'academics' " interpersonal stressors" and "intrapersonal stressors" and "family stressors" respectively between control pre and post-test scores followed by 1% in the area of time balance stressors. This was related

with control group pre and post-test mean score (133.9±24.4and 131.6±28.3) respectively.

The control pretest and post-test mean scores on the level of stress for "academics" (37.13,35.75)), "time balance stressors" (18.04, 17.76), for "Interpersonal stressors" (20.21,19.49), for "intrapersonal stressors" (37.77,8.15) , "family stressors(8.28,3.42), and "environmental stressors" (14.46, 14.19) respectively. The comparison of mean pretest and post test scores on the level of stress shows that there was no significant difference in all the aspects of level of stress.

It is inferred that there was little change in level of stress among student nurses in the control group, since there was not much difference between control pre and post-test mean scores.

TableNo.4.2.4

Area wise distribution of mean, SD and mean percentage of pre-test 2nd post test scores of stress among student nurses in interventional group.

n = 119

Level of stress	Max score	Interventional–I Pre test scores			interventional-2nd Post test scores			Difference in mean %
		Mean	SD	Mean %	Mean	SD	Mean %	
Academic stressors	60	43.28	4.21	72	24.39	3.94	41	31
Time balance stressors	30	21.49	3.1	72	11.31	2.71	38	34
Interpersonal stressors	35	23.32	3.71	67	12.16	2.22	35	32
Intrapersonal stressors	75	44.76	10.01	60	27.86	5.75	37	23
Family stressors	20	8.84	3.8	44	6.17	1.32	31	13
Environmental stressors	30	16.87	4.64	56	9.37	1.84	31	25
Overall	250	158.6	18.6	63	91.25	15.85	37	26

Data in Table 4.2.4 shows the area wise distribution of mean, SD and mean percentage of interventional pre-test and 2nd post test scores which reveals that overall 26% of effectiveness was found with the mean score (158.9±18.6and 91.25±15.85) in all the aspects of level of stress.

The interventional pretest and post-test mean scores on the level of stress for "academics" (43.28,24.29), "time balance stressors" (21.49, 11.41), for "Interpersonal stressors" (23.32, 12.16), for "intrapersonal stressors" (44.76, 27.86), "family stressors (8.84,6.17), "environmental stressors" (16.87, 9.37)

respectively. It is statistically proved that the comparison of mean post-test level of stress scores were lower than mean pre-test level of stress scores in all the areas. Highest effectiveness was found in all the components of level of stress ranging from 13-34% between interventional pre and post test scores.

The interventional post-test mean scores clearly showed that there was a significant reduction in stress level of student nurses in the interventional group during post-test which is more than 13% improvement than in the student nurses of the control group. Hence, it is clearly showed that teaching on coping strategies was effective in reducing the level of stress among student nurses.

TableNo.4.2.5

Area wise distribution of mean, SD and mean percentage of control 2nd post-test and interventional 2rd post-test scores of stress among student nurses.

Area	Max score	Control-2nd Post test scores n=119			Interventional-2nd Post test scores n=126			Difference in mean %
		Mean	SD	Mean %	Mean	SD	Mean %	
Academic stressors	60	35.75	9.29	60	24.39	3.94	41	19
Time balance stressors	30	17.76	5.01	59	11.31	2.71	38	21
Interpersonal stressors	35	19.49	6.22	56	12.16	2.22	35	21
Intrapersonal stressors	75	35.93	8.15	48	27.86	5.75	37	11
Family stressors	20	8.51	3.42	43	6.17	1.32	31	12
Environmental stressors	30	14.19	4.55	47	9.37	1.84	31	16
Overall	250	131.6	28.3	53	91.25	15.85	37	16

Table 4.2.5 shows the area wise distribution of mean, SD and mean percentage of control and interventional post test scores reveals that overall 16% of effectiveness with the mean score (131.6±28.3and 91.25±15.85) in all the components of level of stress.

The control and interventional post-test mean scores of level of stress for academics" (35.75,24.39) "time balance stressors"(17.76,11.31), for "Interpersonal stressors" (19.49,12.16), for "intrapersonal stressors"(35.93,27.86) , "family stressors (8.51,,6.17), "environmental stressors" (14.19,9.37) respectively. . As per the results, the comparison between control and interventional post-test mean scores of stress

showed statistically high significant difference in all the aspects. Highest effectiveness 21% was found in the area of time balance and interpersonal stressors with post-test mean score (17.76±11.31) (19.49±6.22) of the control and (11.31±2.71) (12.16±2.22) of the interventional group respectively.

Thus, it can be interpreted that the overall level of stress among student nurses in the interventional group was lesser than 16% in the control group. Hence, it is again clearly showed that teaching on coping strategies was effective in reducing the level of stress among student nurses.

However, the contrast result in control group may be related to lack of awareness about adaptive coping.

TableNo.4.2.6

Area wise distribution of mean, SD and mean percentage of control pre-test and 2nd post test scores of coping behaviors among student nurses.

n = 126

Area	Max score	Control-Pre test scores			Control-2nd Post test scores			Difference in mean %
		Mean	SD	Mean %	Mean	SD	Mean %	
Time management	50	28.92	2.92	58	28.34	4.32	57	1
Relaxation	50	29.1	3.34	58	29.59	3.59	59	1
Positive thinking	50	27.94	3.99	56	28.37	4.50	57	1
Decision making & problem solving	50	27.94	4.19	56	26.64	4.99	53	3
Ventilation	50	26.9	4.07	54	27.25	5.28	55	1
Overall	250	140.8	10.43	56	140.21	20.11	56	0

The data presented in the Table 4.2.6: shows area wise distribution of mean, SD and mean percentage of control pre-test and 2nd post test scores reveals that overall 0% of difference with the mean score (140.8±10.43and 140.21± 20.11) in all the aspects of coping behaviors regarding coping strategies among student nurses.

The control pretest and post-test mean scores of coping behaviors for "time management" (28.92, 28.34), for "relaxation" (29.1, 29.59), for "positive thinking" (27.94, 28.37), for problem solving and decision making (27.94, 26.64) and for ventilation" (26.9, 27.25) respectively.

The results indicate that the comparison between control pretest and post-test mean coping scores showed that there was no difference in all the aspects of coping behaviors.

The same values indicate that the stress level remains the same which might be related to lack of awareness about adaptive coping among student nurses.

TableNo.4.2.7

Area wise distribution of mean, SD and mean percentage of interventional pre test and 2nd post test scores of coping behaviors among student nurses.

n = 119

Area	Max score	Interventional-Pre test scores			Interventional-2nd Post test scores			Difference in mean %
		Mean	SD	Mean %	Mean	SD	Mean %	
Time management	50	29.49	3.87	59	30.07	2.02	60	4
Relaxation	50	30.55	3.02	61	31.53	2.43	63	2
Positive thinking	50	30.46	3.02	61	30.45	2.78	61	1
problem solving Decision making &	50	28.93	3.43	58	29.96	2.77	60	2
Ventilation	50	29.20	4.01	58	32.79	2.52	66	8
Overall	250	148.1	10.8	59	154.81	2.52	62	3

The data presented in the Table 4.2.7 shows area wise distribution of mean, SD and mean percentage of interventional pre-test and post test scores reveals that overall 3% of difference with the mean score (148.1-±10.8and 154,81± 2.52) in all the aspects of coping behaviors regarding coping strategies of student nurses.

The interventional pre -test and post-test mean scores of coping behaviors for “time management” (29.49, 30.07), for “relaxation” (30.55, 31.53), for “positive thinking” (30.46, 30.45), for problem solving and decision making (28.93, 29.96) and for ventilation” (29.20, 32.79) respectively.

It revealed that the mean post-test coping behaviors score is slightly higher than pre-test coping behaviors score (148.1-±10.8.154.81 ± 2.52), which shows the significant improvement in the mean post-test coping behaviors score. It elicits that there was difference present in all the aspects of coping behaviors.

The results found that the comparison between interventional pre-test and post test scores showed that there was mild difference present in all the aspects of coping behaviors.

The findings indicate the level of coping behaviors among the student nurses in post-test was slightly increased compared with the pretest after implementation of teaching on coping strategies.

TableNo.4.2.8

Area wise distribution of mean, SD and mean percentage of control 2nd post test and interventional 2nd post test scores of coping behaviors among student nurses.

N = 245

Area	Max score	Control-2nd Post test scores n=126			Interventional-2nd Post test scores n=119			Difference in mean %
		Mean	SD	Mean %	Mean	SD	Mean %	
Time management	50	28.34	4.32	55	30.07	2.02	60	5
Relaxation	50	29.59	3.59	59	31.53	2.43	63	4
Positive thinking	50	28.37	4.50	57	30.45	2.78	61	4
Decision making & problem solving	50	26.64	4.99	53	29.96	2.77	60	7
Ventilation	50	27.25	5.28	55	32.79	2.52	66	11
Overall	250	140.21	11	56	154.81	2.52	62	6

As data presented in the Table 4.2.8 indicates area wise distribution of mean, SD and mean percentage of control post-test and interventional post test scores observed that 6%of difference with the mean score (140.21±11 and 154.81±2.52) in all the aspects of coping behaviors among the student nurses.

The interventional pre-test and post-test mean scores of of coping behaviors for “time management” (27.34, 30.07), for “relaxation” (29.59, 31.53), for “positive thinking” (26.64, 29.96), for problem solving and decision making (27.25, 32.79) and for ventilation” (27.25, 32.79) respectively.

The results found that the comparison between the control post-test and interventional mean post test scores of coping behaviors shows that there was overall 6% effectiveness in all the aspects of coping behaviors of the interventional group in comparison with the control group in which 11% effectiveness in the area of ventilation and 7% in the area of problem solving and decision making. The findings indicate the level of coping behaviors among the student nurses in post-test was higher than the pre-test.

Table No 4.2.9

Item wise comparison of control pre -2nd post-test scores in the area of "Academic stressors" on stress among student nurses.

n = 126

Academic stressors	Control pre test										Control 2nd post test									
	never		seldom		sometimes		often		always		Never		seldom		sometimes		often		always	
	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%
Increased workload	4	3	14	11	45	36	37	29	26	20	7	6	21	17	64	51	17	13	17	13
Scored low mark	2	2	16	13	43	34	39	31	26	21	6	5	32	25	48	38	28	22	12	10
Strict rules	1	1	22	17	44	35	35	28	24	19	2	2	46	37	40	32	20	16	18	14
Difficult in understanding study material	7	6	24	19	38	30	37	29	20	16	14	11	37	29	35	28	23	18	17	13
Difficulty to complete procedure in time	12	10	22	17	45	36	34	27	13	10	21	17	36	29	33	26	25	20	11	9
Fear of failing	6	5	20	16	41	32	35	28	24	19	6	5	35	28	42	33	25	20	18	14

Lack of clarity about assignments	5	4	15	12	39	31	45	36	22	17	6	5	36	29	42	33	31	25	11	9
Difficulty in oral presentation	4	3	19	15	30	24	51	40	22	17	7	6	41	33	37	29	31	25	10	8
Difficult in group work	7	6	26	20	33	26	50	40	10	8	13	10	44	35	31	25	28	22	10	8
Changing the medium	9	7	11	8	31	25	44	35	31	25	15	12	33	26	29	23	24	19	25	20
Lack of vacation	5	4	20	16	31	25	48	38	22	17	14	11	39	31	29	23	33	26	11	9
Not able write fluently	7	6	22	17	37	29	40	32	20	16	9	7	51	40	28	22	22	17	16	13

Table 4.2.9 displays the item wise comparison of control pre -2nd post test scores in the area of "Academic stressors "on stress among student nurses.

The findings regarding the area of academic stressors revealed that majority of the subjects in the control pre-test and 2nd post-test responded under the category "often'' score ranged from 28% to 40% and 17% to 40% under the category "seldom'' respectively.

Table No 4.2.10

Item wise comparison of control pre -2nd post-test scores in the area of "Time balance stressors" on stress among student nurses.

n = 126

Time balance stressors	Control pre-test										Control 2nd post-test									
	never		seldom		sometimes		often		always		never		seldom		sometimes		often		always	
	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%
Not reviewed studied portion	4	3	22	17	39	31	42	33	19	15	11	9	25	20	52	41	24	19	14	11
Difficulty of daily responsibility	1	1	24	19	41	33	44	35	16	13	-	-	58	46	31	25	27	21	10	8
No time for academic & leisure	3	3	19	15	49	39	29	23	26	21	8	6	39	31	45	36	18	14	16	13
Not prepare for theory	5	4	26	21	33	27	45	36	17	13	14	11	42	33	27	21	28	22	15	12
Not perform in practical	5	4	15	12	42	33	43	34	21	17	5	4	42	33	37	29	30	24	12	10
Lack self-care	2	2	21	17	37	29	46	37	20	16	13	10	37	29	35	28	29	23	12	10

Table No 4.2.10.depicts item wise comparison of control pre -2nd post test scores in the area of "Time balance stressors on stress among student nurses.

The findings regarding the area of time balance stressors revealed that majority of the subjects in the control pre-test responded under the category "sometimes'' score ranged from 27% to 39% and 2nd post-test responded 20% to 46 % under the category "seldom'' respectively.

Table No 4.2.11

Item wise comparison of control pre -2nd post- test scores in the area of 'Interpersonal stressors" on stress among student nurses.

n = 126

Interpersonal stressors	Control pre-test										Control 2nd post-test									
	never		seldom		Sometimes		often		always		never		seldom		sometimes		often		always	
	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%
Not mingle with new friends	11	9	26	21	28	22	51	40	10	8	10	8	54	43	21	17	27	21	14	11
Difficulty to study in new atmosphere	8	6	20	16	43	34	42	33	13	10	2	2	49	39	33	26	35	28	7	6
Misunderstanding with roommates	20	16	29	23	34	27	40	32	3	2	15	12	45	36	35	28	26	21	5	4
Difficulty to cope new responsibility	19	15	31	25	32	25	37	29	7	6	13	10	58	46	25	20	23	18	7	6

Withdrawal from friendship	12	10	22	17	25	20	50	40	17	13	19	15	43	34	19	15	35	28	10	8
Difficult to find support	10	8	24	19	36	29	33	26	23	18	14	11	47	37	18	14	25	20	22	17
Difficult to compete with others	14	11	24	19	43	34	36	29	9	7	25	20	42	33	23	18	29	23	7	6

Table No 4.2.11 depicts item wise comparison of control pre -2nd post test scores in the area of interpersonal stressors of stress among student nurses.

The findings regarding the area of interpersonal stressors revealed that majority of the subjects in the control pre-test responded under the category "sometimes'' score ranged from 26% to 40% and 2nd post-test responded 33% to 43 % under the category "seldom'' respectively.

Table No 4.2.12

Item wise comparison of control pre -2nd post-test scores in the area of "Intra personal stressors" on stress among student nurses.

n = 126

Intra personal stressors	Control pre-test										Control 2nd post-test									
	never		seldom		Sometimes		often		always		never		seldom		sometimes		often		always	
	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%
Lack of motivation	29	23	25	20	42	33	21	17	9	7	21	17	43	34	41	33	11	9	10	8
Less interest in study	32	25	32	25	32	25	26	21	4	4	31	25	43	34	35	28	15	12	2	2
Thinking low myself	35	28	28	22	42	33	14	11	7	6	28	22	45	36	33	26	16	13	4	3
Thinking high myself	37	29	31	25	41	33	9	7	8	6	28	22	48	38	39	31	7	6	4	3
Not think clearly	19	15	43	34	41	32	17	13	6	5	18	14	48	38	37	29	14	11	9	7

Laziness	29	23	41	33	37	29	15	12	4	3	18	14	61	48	35	28	7	6	5	4
Lack of discipline	35	28	43	34	32	25	12	10	4	3	32	25	50	40	28	22	14	11	2	2
Loneliness	35	28	40	32	29	23	16	13	5	4	30	24	53	42	27	22	10	8	5	4
Headache	32	25	32	25	37	29	17	13	8	6	34	27	47	37	34	27	6	5	5	4
Insomnia	40	32	31	25	33	26	16	13	6	5	25	20	47	37	40	32	10	8	4	3
Tiredness	21	17	35	28	43	34	19	15	8	6	21	17	45	36	41	33	13	10	6	5
Heart palpitation	24	19	30	24	40	32	21	17	9	7	38	30	44	35	27	21	11	9	6	5
Low self confidence	33	26	27	22	37	30	22	18	6	5	32	25	48	38	19	15	19	15	8	6
Difficult in concentration	23	18	36	29	40	32	18	14	9	7	19	15	47	37	36	29	17	13	7	6
Forgetfulness	17	13	28	22	40	32	26	21	15	12	21	17	41	33	38	30	14	11	12	10

Table No 4.2.12 depicts item wise comparison of control pre -2nd post test scores in the area of intra personal stressors on stress among student nurses.

The findings regarding the area of interpersonal stressors revealed that majority of the subjects in the control pre-test responded under the category "sometimes'' score ranged from 25%-34% and 2nd post-test responded 33% to 48% under the category "seldom'' respectively.

Table No 4.2.13

Item wise comparison of control pre -2nd post-test scores in the area of "Family stressors" on stress among student nurses.

n = 126

Family stressors	Control pre-test										Control 2nd post-test									
	never		seldom		Sometimes		often		always		never		seldom		sometimes		often		always	
	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%
Strict parents	47	37	29	23	41	33	5	4	4	3	41	33	45	36	30	24	5	4	5	4
Away from home for first time	47	37	27	21	34	27	16	13	2	2	49	39	32	25	28	22	11	9	6	5
Not able to meet parents	49	39	38	30	25	20	11	9	3	2	32	25	58	46	19	15	12	10	5	4
Financial constrains	62	50	31	25	13	10	14	11	4	3	60	48	26	21	18	15	9	7	11	9

Table No 4.2.13 depicts item wise comparison of control pre -2nd post test scores in the area of family stressors of stress among student nurses.

The findings regarding the area of interpersonal stressors revealed that majority of the subjects in the control pre-test responded under the category "sometimes'' score ranged from 10%-33% and 2nd post-test responded 25% to 48 % under the category "never'' respectively.

Table No 4.2.14

Item wise comparison of control pre -2nd post-test scores for the area of "Environmental stressors" on stress among student nurses.

n = 126

Environmental stressors	Control pre-test										Control 2nd post-test									
	never		seldom		Sometimes		often		always		never		seldom		sometimes		often		always	
	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%
Given last priority	29	23	27	21	29	23	14	11	27	21	30	24	47	37	13	10	16	13	20	16
Difficulty to approach teachers	32	25	37	29	36	29	18	14	3	2	30	24	48	38	29	23	10	8	9	7
Unfamiliar hostel	35	28	33	26	33	26	18	14	7	6	24	19	52	42	27	21	13	10	9	7
Uncomfortable classroom	42	33	28	22	36	29	18	14	2	2	37	29	34	27	24	19	24	19	7	6
Lack of telephone	40	32	41	32	29	23	13	10	3	2	37	29	53	42	13	10	18	14	5	4
Lack of recreation	35	28	37	29	38	30	14	11	2	2	46	37	43	34	24	19	6	5	7	6

Table No 4.2.14 depicts item wise comparison of control pre -2nd post test scores in the area of environmental stressors on stress among student nurses.

The findings regarding the area of environmental stressors revealed that majority of the subjects in the control pretest responded under the category "never'' score ranged from 23%-32% and 2nd posttest responded 27% to 42 % under the category "seldom'' respectively.

Table No 4.2.15

Item wise comparison of interventional pre–interventional 2nd post-test scores on stress in the area of Academic stressors among student nurses.

N = 119

Academic stressors	Interventional pre-test										Interventional 2nd post-test									
	never		seldom		Sometimes		often		always		never		seldom		sometimes		often		always	
	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%
Increased workload	1	1	9	8	27	23	36	30	46	39	9	8	53	44	57	48	-	-	-	-
Scored low marks	1	1	8	7	40	34	48	40	22	18	16	13	63	53	40	34	-	-	-	-
Strict rules	3	2	16	13	28	24	42	35	30	25	7	6	80	67	32	27	-	-	-	-
Difficulty to understand study material	1	1	13	11	42	35	43	36	20	17	26	22	71	60	22	18	-	-	-	-
Difficulty in completing procedure	4	3	15	13	44	37	33	28	23	19	17	14	79	66	23	19	-	-	-	-
Fear of failing	5	4	12	10	43	36	40	34	18	15	13	11	68	57	38	32	-	-	-	-
Lack of clarity	4	3	9	8	35	29	44	37	27	23	12	10	80	67	26	22	1	1	-	-
Difficult oral presentation	2	2	15	13	33	27	35	29	34	29	17	14	76	64	25	21	1	1	-	-
Difficult in group assignment	1	1	18	15	41	34	41	34	18	15	43	36	58	49	15	13	3	3	-	-
Change in medium	6	5	10	8	36	30	40	34	27	23	61	51	38	32	19	16	1	1	-	-
Lack of vacation	10	8	12	10	29	24	54	45	14	12	48	40	46	39	24	20	1	1	-	-
No fluency in writing	3	2	11	9	39	33	46	39	20	17	40	34	59	50	20	17	-	-	-	-

Table No 4.2.15 depicts item wise comparison of interventional pre – interventional 2nd post test scores on stress in the area of academic stressors among student nurses.

The data from this item showed that highest percentage of the subjects in the interventional pre-test responded the option of often ranging from 28%-40% and the interventional 2nd post test responded under the category seldom ranging from 32%-67%. The student nurses who responded often in the pretest again responded seldom in the posttest. The results clearly shows that the stressors started to decline after the intervention.

Table No 4.2.16

Item wise comparison of interventional pre – interventional 2nd post-test scores of stress in the area of "Time Balance stressors'' among student nurses.

n = 119

Time balance stressors	Interventional pre-test										Interventional 2nd post-test									
	never		seldom		sometimes		often		always		never		seldom		sometimes		often		always	
	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%
Not review studied portion	2	2	12	10	38	31	39	33	28	23	39	33	37	31	43	36	--	-	-	-
Difficulty in daily responsibility	2	2	13	11	42	36	43	36	18	15	18	15	85	71	16	13	--	-	-	-
No time for academic & leisure	3	3	9	8	47	39	38	32	22	18	47	40	47	40	25	20	-	-	-	-
Not prepare for theory	2	2	15	13	34	29	48	40	20	17	42	35	64	54	13	11	-	-	-	-
Not perform in practical	3	3	2	2	52	44	46	39	16	13	46	39	47	40	26	22	-	-	-	-
Lack self-care	1	1	11	9	45	38	39	33	23	19	36	30	61	51	22	18	-	-	-	-

Table No 4.2.16 depicts item wise comparison of interventional pre – interventional 2nd post test scores of stress in the area of time balance stressors among student nurses

The data from this item showed that highest percentage of the subjects in the interventional pre-test responded the option of "often'' ranging from 32%-40% and the interventional 2nd post test responded under the category "seldom'' ranging from 31%-71% and no one has responded for the category "often'' and "always''. The above stated results clearly shows that the stressors started to decline after the intervention.

Table No 4.2.17

Item wise comparison of pre interventional – interventional 2nd post-test of stress in the area of Interpersonal Stressors among student nurses.

n = 119

Interpersonal stressors	Interventional pre-test										Interventional 2nd post-test									
	never		seldom		sometimes		often		always		never		seldom		sometimes		often		always	
	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%
Difficult to mingle	7	6	12	10	28	24	63	53	9	8	34	29	76	64	9	8	-	-	-	-
Difficult to study in new atmosphere	7	6	12	10	41	34	51	43	8	7	24	20	69	58	25	21	1	1	-	-
Misunderstanding	10	8	17	14	49	41	34	29	9	8	50	42	56	47	13	11	-	-	-	-
Difficult to cope	6	5	23	19	48	40	35	29	7	6	32	27	79	66	8	7	-	-	-	-
Withdrawal friendship	6	5	15	13	32	27	50	42	16	13	63	53	45	38	11	9	-	-	-	-
Difficult to find support	5	4	10	8	41	34	46	39	17	14	46	39	63	53	10	8	-	-	-	-
Difficult to compete	5	4	20	17	42	36	37	31	15	13	49	41	67	56	3	3	-	-	-	-

Table No 4.2.17 depicts item wise comparison of interventional pre – interventional 2nd post test scores of stress in the area of inter personal stressors among student nurses.

The data from this item showed that highest percentage of the subjects in the interventional pre-test responded the option of "often'' ranging from 34%-63% and the interventional 2nd post test responded under the category often is 1% and no one has responded for the category "always''. The above stated results clearly shows that the stressors started to decline after the intervention.

Table No 4.2.18

Item wise comparison of interventional pre – interventional 2nd post-test scores of stress in the area of intrapersonal stressors among student nurses.

n = 119

Intrapersonal stressors	Interventional pre-test n=119										Interventional 2nd post-test n=119									
	never		seldom		sometimes		often		always		never		seldom		sometimes		often		always	
	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%
Lack of motivation	15	13	13	11	42	35	36	30	13	11	37	31	57	48	25	21	-	-	-	-
Lack of interest	15	13	18	15	39	33	36	30	11	9	34	29	59	49	26	22	-	-	-	-
Think low of my self	17	14	19	16	43	36	30	25	10	8	43	36	53	44	23	19	-	-	-	-
Think high of my self	29	24	14	12	47	40	23	19	5	4	18	15	77	65	24	20	-	-	-	-
Not think clearly	11	9	16	13	51	43	28	24	13	11	40	33	53	44	26	22	-	-	-	-
Laziness	7	6	26	22	48	40	28	24	10	8	25	21	79	66	15	13	-	-	-	-

Lack of discipline	25	21	28	23	35	29	26	22	5	4	48	40	49	41	22	18	-	-	-	-
Loneliness	23	20	26	22	35	30	19	16	14	12	33	28	70	59	16	13	-	-	-	-
Headache	23	19	20	17	36	30	27	23	13	11	48	40	48	40	23	20	-	-	-	-
Insomnia	30	25	21	18	34	29	23	19	11	9	25	21	65	55	29	24	-	-	-	-
Tiredness	21	18	17	14	37	31	29	24	15	13	32	27	49	41	36	30	2	2	-	-
Heart palpitation	17	14	29	24	35	29	25	21	13	11	55	46	51	43	11	9	2	2	-	-
Low self confidence	16	14	9	8	44	38	34	29	14	12	55	46	59	50	5	4	-	-	-	-
Difficult in concentration	10	8	10	8	51	43	28	24	20	17	39	33	65	55	15	13	-	-	-	-
Forgetfulness	4	3	22	18	38	32	36	30	19	16	58	49	40	34	21	18	-	-	-	-

Table No 4.2.18 depicts item wise comparison of interventional pre – interventional 2nd post test scores of stress in the area of intra personal stressors among student nurses.

The data from the above stated item showed that highest percentage of the subjects in the interventional pre-test responded the option of some times ranging from 29%-43% and in the interventional 2nd post test responded under the category seldom ranging from is 41%to 66%. The above stated results clearly shows that the stressors started to decline after the intervention.

Table No 4.2.19

Item wise comparison of interventional pre – interventional 2nd post-test scores for the area of Family Stressors on stress among student nurses.

n = 119

Family Stressors	Interventional pre-test n=119										Interventional 2nd post-test n=119									
	never		seldom		sometimes		often		always		never		seldom		sometimes		often		always	
	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%
Over strict	38	32	25	21	41	34	11	9	4	3	76	64	35	29	8	7	-	-	-	-
Away from home first time	39	33	26	22	36	30	15	13	3	3	35	29	78	66	6	5	-	-	-	-
Not meet parents	49	42	25	21	25	21	15	13	4	3	70	59	40	34	9	8	-	-	-	-
Financial constrains	50	42	31	26	17	14	14	12	6	5	67	56	45	38	7	6	-	-	-	-

Table No 4.219 depicts item wise comparison of interventional pre – interventional 2nd post test scores of stress in the area of family stressors in the level among student nurses.

The data from the above stated item showed that highest percentage of the subjects in the interventional pre-test responded the option of" never'' ranging from 38%-50% and in the interventional 2nd post test responded under the category "seldom'' ranging from is 29%to 66%. The above stated results clearly show that the family stressors were found to be less in both pre and post-test.

Table No 4.2.20

Item wise comparison of interventional pre – interventional 2nd post-test scores in stress on the area of Environmental stressors on coping strategies among student nurses.

n = 119

Environmental stressors	Interventional pre-test										Interventional 2nd post-test									
	never		seldom		sometimes		often		always		never		seldom		sometimes		often		always	
	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%
Given last priority	19	16	14	12	39	33	21	18	26	22	74	62	41	34	4	4	-	-	-	-
Difficulty in approach	17	14	25	21	45	38	25	21	7	6	32	27	77	65	10	8	-	-	-	-
Unfamiliar hostel	19	16	24	20	41	35	25	21	9	8	62	52	54	45	3	3	-	-	-	-
Uncomfortable class room	27	23	17	14	36	30	36	30	3	3	56	46	59	50	4	4	-	-	-	-
Lack of telephone	20	17	28	24	39	32	24	20	8	7	59	50	55	47	5	4	-	-	-	-
Lack of recreation	27	23	32	27	37	31	16	13	7	6	63	53	49	41	7	6	-	-	-	-

Table No 4.2.20 depicts item wise comparison of interventional pre – interventional 2nd post test scores on the area of family stressors in stress among student nurses.

The data from the above stated item showed that highest percentage of the subjects in the interventional pre-test responded the option of "sometimes'' ranging from 30%-38% and in the interventional 2nd post-test responded under the category "seldom'' ranging from is 34%to 65%. The above stated results clearly shows that the stressors were found to be less in the post-test.

Table No 4.2.21

Item wise comparison of control pre -2nd post-test in the area of Time management on coping among student nurses.

n = 126

Time management	Control pre-test										Control 2nd post-test									
	never		seldom		sometimes		often		always		never		seldom		sometimes		often		always	
	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%
Lack of goals	13	10	46	37	21	17	25	20	21	17	38	31	31	25	8	6	26	21	23	18
Use regular study habit	13	10	61	48	39	31	7	5	6	5	13	10	42	33	29	23	30	24	12	10
Study hard	18	14	21	17	58	46	24	19	5	4	21	17	36	29	21	17	44	35	4	3
Not comfort place	27	21	20	16	53	42	21	17	5	4	22	17	34	27	18	14	45	36	7	6
Wait others to study	5	4	45	36	32	25	24	19	20	16	25	20	44	35	6	5	18	14	33	26
Pay attention	23	18	27	21	45	36	27	21	4	3	34	27	28	22	6	5	50	40	8	6
Study continuously	13	10	34	27	32	25	27	21	20	16	38	30	41	33	4	3	34	27	9	7
Simple to complex	2	2	7	6	55	44	46	37	16	13	44	35	31	25	18	14	22	17	11	8
Not aware of time to study	9	7	19	15	59	47	23	18	16	13	49	39	17	13	8	6	23	22	29	23
Frequent review plan	26	21	35	28	44	35	16	13	5	4	41	33	23	18	7	6	47	37	8	6

Table No 4.2.21 depicts item wise comparison of control pre -2nd post test scores in the area of time management on coping behaviours among student nurses.

The data from the above stated item showed that highest percentage of the subjects in the conrol pre-test responded the option of sometimes ranging from 17%-47% and in the control 2nd post-test responded under the category " often'' ranging from is 17%to 40%. The above stated results clearly shows that the stressors were found to be increased in the post-test.

Table No 4.2.22

Item wise comparison of control pre -2nd post-test scores in the area of Relaxation on coping behaviours among student nurses.

n = 126

Relaxation	Control pre-test										Control 2nd post-test									
	never		seldom		sometimes		often		always		never		seldom		sometimes		often		always	
	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%
Fell ill	5	4	60	48	28	22	11	9	22	17	19	15	46	37	4	3	20	16	37	29
Improve bodily resistance	17	13	28	22	41	33	35	28	5	4	24	19	36	29	10	8	46	37	10	8
I feel tired	8	6	57	45	33	26	18	14	10	8	16	13	44	35	15	12	29	23	22	17
Regulate sleep pattern	22	17	44	35	30	24	22	17	8	6	33	26	29	23	12	10	42	33	10	8
Think low of my self	12	10	35	28	44	35	20	16	15	12	21	17	33	26	18	14	42	33	12	10
Increase strength	21	17	14	11	45	36	40	32	6	5	25	20	37	29	19	15	41	33	4	3
Disturbance in concentration	13	10	25	20	43	34	27	21	18	14	18	14	37	29	13	10	23	18	35	27
Improve concentrate	25	20	17	13	48	38	28	22	8	6	26	21	27	21	13	10	40	32	20	16
Don’t sleep well at night	10	8	33	26	46	37	21	17	16	13	10	8	48	38	14	11	25	20	29	23
Enhance self esteem	14	11	15	12	45	36	43	34	9	7	34	27	24	19	15	12	35	28	18	14

Table No 4.2.22 depicts item wise comparison of control pre -2nd post test scores in the area of relaxation on coping behaviours among student nurses.

The data from the above stated item showed that highest percentage of the subjects in the control pre-test responded the option of "seldom'' ranging from 11%-48% and in the control 2nd post test responded under the category "often'' ranging from is 21%to 37%. The above stated results clearly shows that the stressors were found to be the same in pre and post-test.

Table No 4.2.23

Item wise comparison of control pre -2nd post-test scores in the area of "Positive thinking" on coping behaviours among student nurses.

n = 126

Positive thinking	Control pre-test										Control 2nd post-test									
	never		seldom		sometimes		often		always		never		seldom		sometimes		often		always	
	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%
Feeling optimistic	29	23	27	21	43	34	23	18	4	3	41	33	53	42	15	12	5	4	12	10
Think about difficulties	16	13	44	35	31	25	18	14	17	13	14	11	12	10	2	2	61	48	37	29
Find something good	26	20	32	25	45	36	21	17	2	2	33	26	61	48	19	15	11	9	2	2
Think negatively	10	8	44	34	34	27	21	17	17	13	14	11	6	5	8	6	59	47	39	31
Feeling confident	25	20	58	46	33	26	5	4	5	4	30	24	72	57	11	9	9	7	4	3
Forcing on benefits	22	17	24	19	41	33	19	15	20	16	13	10	9	7	5	4	46	37	53	42
Feel bad about my self	23	18	23	18	46	37	29	23	5	4	38	30	63	50	14	11	7	6	4	3
Don't have confidence	14	11	17	13	49	39	27	21	19	15	11	9	7	6	14	11	64	51	30	24
Feel good about my self	22	17	26	21	51	40	23	18	4	3	32	25	62	49	13	10	14	11	5	4
Perceive all events	13	10	16	13	52	41	31	25	14	11	21	17	18	14	8	6	49	39	30	24

Table No 4.2.23 depicts item wise comparison of control pre -2nd post test scores in the area of positive thinking on coping behaviours among student nurses.

The data from the above stated item showed that highest percentage of the subjects in the control pre test responded the option of "seldom'' ranging from 21%-46% and in the control 2nd post test responded under the category "often'' ranging from is 5%to 48%. The above stated results clearly shows that the stressors were found to be the same in pre and post-test.

Table No 4.2.24

Item wise comparison of control pre -2nd post-test scores in problem solving and Decision making on coping behaviours among student nurses.

n = 126

Problem solving and decision making	Control pre-test n=126										Control 2nd post-test n=126									
	never		seldom		sometimes		often		always		never		seldom		sometimes		often		always	
	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%
Difficult to find problem	18	14	3	2	45	36	36	29	24	19	30	24	10	8	6	5	50	40	30	24
Difficult to find solution	15	12	20	16	52	41	19	15	20	16	23	18	13	10	12	10	47	37	31	25
Gather all data's	26	21	46	37	42	33	10	8	2	2	48	38	59	47	11	9	6	5	2	2
Identify solution	27	21	35	28	47	37	13	10	4	3	43	34	62	49	18	14	3	3	-	-
Prioritize data	35	28	31	24	43	34	16	13	1	1	61	48	45	36	15	12	5	4	-	-
Implement priority	26	21	22	17	44	35	29	23	5	4	48	38	61	48	12	10	2	2	3	2
Select solution	9	7	19	15	47	37	36	29	15	12	10	8	17	13	17	13	54	42	28	22
Make plan of action	24	19	26	21	55	44	18	14	3	3	45	36	66	52	6	5	6	5	3	2
Don't wait to solve problem	18	14	33	26	35	28	30	24	10	8	10	8	14	11	6	5	69	55	27	21
Don't evaluate decision	10	8	12	10	54	43	39	31	11	9	11	9	16	13	18	14	50	40	31	25

Table No 4.2.24 depicts item wise comparison of control pre -2nd post-test scores in the area of problem solving and decision making on coping behaviours among student nurses.

The data from the above stated item showed that highest percentage of the subjects in the interventional pre-test responded the option of "seldom'' ranging from 28%-44% and in the control 2nd post-test responded under the category "never'' ranging from 8%to 48%. The above stated results clearly show that the stressors were found to be decreased to a minimal range in the posttest.

Table No 4.2.25

Item wise comparison of control pre -2nd post-test scores in the area of Ventilation on coping behaviours among student nurses.

n = 126

Ventilation	Control pre-test										Control 2nd post-test									
	never		seldom		Sometimes		often		always		never		seldom		sometimes		often		always	
	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%
No friendship	12	10	40	32	32	25	17	13	25	20	25	20	5	4	13	10	22	17	61	48
Write problem & destroy	39	31	37	29	36	29	12	10	2	2	65	52	51	40	5	4	4	3	1	1
Push unpleasant thing	7	5	40	32	29	23	32	25	18	14	26	21	2	2	11	9	53	42	34	27
Cry	33	26	54	43	30	24	6	5	3	3	56	44	55	44	12	10	1	1	2	2
Blame others	7	6	45	36	30	24	28	22	16	13	22	17	8	6	21	17	37	29	38	30
Ventilate to others	30	24	36	29	41	33	17	13	2	2	42	33	60	48	15	12	8	6	1	1
Express anger	8	6	48	38	31	25	23	18	16	13	19	15	8	6	16	13	49	39	34	27
Do interesting work	33	26	44	35	35	28	6	5	8	6	43	34	56	44	11	9	11	9	5	4
Complain to superior	15	12	25	20	43	34	25	20	18	14	13	10	10	8	13	44	55	44	35	28
Spiritual support	31	25	16	13	42	34	30	24	6	5	52	42	40	32	19	15	11	9	3	2

Table No 4.2.25 depicts item wise comparison of control pre -2nd post test scores in the area of ventilation on coping behaviours among student nurses.

The data from the above stated item showed that highest percentage of the subjects in the interventional pre-test responded the option of "sometimes'' ranging from 13%-38% and in the control 2nd post-test responded under the category "seldom'' ranging from 2%to 48%. The above stated results clearly show that the stressors were found to be the same in both the pre and post-test.

Table No 4.2.26

Item wise comparison of interventional pre – interventional 2nd post-test scores in the area of Time management on coping behaviours among student nurses.

n = 119

Time management	Interventional pre-test										Interventional 2nd post-test									
	never		seldom		sometimes		often		always		never		seldom		sometimes		often		always	
	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%	F	%	f	%
Lack of goals	-	-	1	1	33	28	36	30	49	41	40	34	62	52	13	11	4	4	-	-
Use regular study habit	43	36	66	55	7	6	2	2	1	1	1	1	16	13	-	-	71	60	31	26
Study hard	25	21	27	23	18	15	42	35	7	6	39	33	77	65	2	2	1	1	-	-
Not comfort place	48	40	52	44	18	15	1	1	-	-	-	-	1	1	20	17	85	71	13	11
Wait others to study	1	1	4	3	21	18	48	40	45	38	27	23	76	64	10	8	3	3	3	3
Pay attention	41	34	46	39	20	17	6	5	6	5	-	-	-	-	6	5	62	52	51	43
Study continuously	3	3	11	9	12	10	56	47	37	31	38	32	74	62	7	6	-	-	-	-
Simple to complex	11	9	31	26	26	22	31	26	20	17	-	-	-	-	17	14	46	39	56	47
Not aware of time to study	2	2	5	4	29	24	39	33	44	37	55	46	59	50	3	3	1	1	1	1
Frequent review plan	49	41	54	45	11	9	1	1	4	3		-	-	-	7	8	50	42	62	52

Table No 4.2.26 depicts item wise comparison of interventional -2nd post test scores in the area of time management on coping behaviours among student nurses.

The data from the above stated item showed that highest percentage of the subjects in the interventional pre-test responded the option of" often'' ranging from 1%-47% and in the interventional 2nd post-test responded under the category "often'' ranging from is 1%to 71%. The above stated results clearly show that the adaptive coping behaviors were found to be increased in the post-test.

Table No 4.2.27

Item wise comparison of interventional pre–interventional 2nd post-test on the area of Relaxation on coping behaviours among student nurses.

n = 119

Relaxation	Interventional pre-test										Interventional 2nd post-test									
	never		seldom		sometimes		often		always		never		seldom		sometimes		often		always	
	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%
Fell ill	2	2	6	5	20	17	43	36	48	40	22	18	65	55	32	27	-	-	-	-
Improve bodily resistance	49	41	43	36	18	15	6	5	3	2	-	-	1	1	6	5	58	49	54	45
I feel tired	7	6	6	5	24	20	48	40	34	29	31	26	60	50	26	22	2	2	-	-
Regulate sleep pattern	17	14	64	54	27	23	9	8	2	2	-	-	2	2	11	9	60	50	46	39
Think low of my self	8	7	8	7	14	12	51	43	38	32	26	22	64	54	26	22	2	2	1	1
Increase strength	30	25	47	40	26	22	14	12	2	2	1	1	4	3	28	24	57	48	29	24
Disturbance in concentration	1	1	10	8	20	17	43	36	45	38	28	24	59	50	29	24	3	3	-	-
Improve concentration	43	35	45	38	10	8	5	4	16	13	-	-	1	1	5	4	52	44	61	51
Don’t sleep well at night	1	1	9	8	21	18	48	40	40	34	19	16	69	58	27	23	2	2	2	2
Enhance self esteem	37	31	44	37	23	19	14	12	1	1	-	-	-	-	17	14	65	55	37	31

Table No 4.2.27 depicts item wise comparison of interventional -2nd post test scores in the area of relaxation on coping behaviors among student nurses.

The data from the above stated item showed that highest percentage of the subjects in the interventional pre-test responded the option of ‘‘often’’ ranging from 5%-54% and in the interventional 2nd post-test responded under the category ‘‘often’’ ranging from is 2% to 55%. The above stated results clearly show that the adaptive coping behaviors were found to be increased in the posttest. From these findings it is interpreted that the adaptive coping behaviors were increased only due to the interventional effectiveness in the post-test.

Table No 4.2.28

Item wise comparison of interventional pre–interventional 2nd post-test in the area of Positive thinking on Coping behaviors among student nurses.

n = 119

Positive thinking	Interventional pre-test										Interventional 2nd post-test									
	never		seldom		sometimes		often		always		never		seldom		sometimes		often		always	
	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%
Feeling optimistic	45	38	56	47	14	12	2	2	2	2	-	-	2	2	44	37	63	53	10	8
Think about difficulties	6	5	5	4	14	12	60	50	34	29	21	18	66	55	22	18	5	4	5	4
Find something good	21	18	52	44	29	24	10	8	7	6	-	-	2	2	29	24	48	40	40	34
Think negatively	5	4	8	7	16	13	51	43	39	33	21	18	64	54	30	25	3	3	1	1
Feeling confident	22	18	67	56	23	19	6	5	1	1	1	1	10	8	19	16	48	40	41	35
Forcing on benefits	1	1	3	3	16	13	41	34	58	49	3	3	8	7	5	4	53	45	50	42
Feel bad about my self	38	32	47	40	20	17	7	6	7	6	20	17	58	49	39	33	2	2	-	-
Don’t have confidence	6	5	10	8	17	14	64	54	22	18	42	35	58	49	19	16	-	-	-	-
Feel good about my self	27	23	65	54	16	13	7	6	4	3	-	-	2	2	12	10	52	44	53	45
Perceive all events	3	3	5	4	21	18	56	47	34	29	31	26	79	66	5	4	2	2	2	2

Table No 4.2.28 depicts item wise comparison of interventional -2nd post test scores in the area of relaxation On coping behaviors among student nurses.

The data from the above stated item showed that highest percentage of the subjects in the interventional pre-test responded the option of "seldom'' ranging from 3%-56% and in the interventional 2nd post-test responded under the category "often'' ranging from is 2%to 55%. The above stated results clearly shows that the adaptive coping behaviors were found to be increased in the posttest. From these findings it is interpreted that the adaptive coping behaviors were increased only due to the interventional effectiveness in the post-test.

Table No 4.2.29

Item wise comparison of interventional pre – interventional 2nd post-test on the area of Decision making and problem solving on coping behaviours among student nurses.

n = 119

Problem solving and decision making	Interventional pre-test n=119										Interventional 2nd post-test n=119									
	never		seldom		sometimes		often		always		never		seldom		sometimes		often		always	
	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%
Difficult to find problem	2	2	5	4	26	22	49	42	37	31	26	22	61	51	27	23	5	4	-	-
Difficult to find solution	6	5	8	7	22	18	46	39	37	31	23	19	78	66	9	8	7	6	2	2
Gather all data's	37	31	54	45	28	24	-	-	-	-	-	-	6	5	10	8	69	58	34	29
Identify solution	31	26	58	49	22	18	4	3	4	3	1	1	17	14	18	15	48	40	35	29
Prioritize data	45	38	46	39	24	20	4	3	-	-	-	-	-	-	8	7	86	72	25	21
Implement priority	34	29	56	47	25	21	2	2	2	2	-	-	2	2	3	3	43	36	71	60

Select solution	6	5	17	14	34	29	39	33	23	19	30	25	82	69	5	4	2	2	-	-
Make plan of action	33	28	37	31	25	21	20	17	4	3	1	1	8	7	18	15	65	55	27	23
Don’t wait to solve problem	5	4	7	6	22	18	60	50	25	21	49	41	63	53	6	5	1	1	-	-
Don’t evaluate decision	1	1	23	19	26	22	39	33	30	25	38	32	72	61	3	3	5	4	1	1

Table No 4.2.29 depicts item wise comparison of interventional -2nd post test scores in the area of problem solving and decision making on coping behaviours among student nurses.

The data from the above stated item showed that highest percentage of the subjects in the interventional pre-test responded the option of "never'' ranging from 1%-38% and in the interventional 2nd post-test responded under the category "often'' ranging from is 2%to 69%. The above stated results clearly shows that the adaptive coping behaviors were found to be increased in the posttest .From these findings it is interpreted that the adaptive coping behaviors were increased only due to the interventional effectiveness in the post-test.

Table No 4.2.30

Item wise comparison of interventional pre – interventional 2nd post-test on the area of Ventilation on coping behaviors among student nurses.

n = 119

Ventilation	Interventional pre-test										Interventional 2nd post-test									
	never		seldom		sometimes		often		always		never		seldom		sometimes		often		always	
	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%
No friendship	15	13	6	5	17	14	26	22	55	46	41	35	62	52	11	9	4	4	1	1
Write problem & destroy	65	54	40	34	3	3	4	4	7	6	-	-	-	-	12	10	53	45	54	45
Push unpleasant thing	2	2	15	13	7	6	62	52	33	28	21	18	56	47	39	33	3	3	-	-
Cry	45	38	54	45	15	13	3	3	2	2	-	-	1	1	4	4	49	41	65	54
Blame others	11	9	8	7	24	20	43	36	33	28	20	17	47	40	39	33	7	6	6	5
Ventilate to others	37	31	45	38	25	21	8	7	4	3	-	-	3	3	25	21	76	64	15	13
Express anger	4	3	6	5	26	22	39	33	44	37	15	13	60	50	22	18	9	8	13	11
Do interesting work	39	33	43	36	16	13	9	8	12	10	-	-	1	1	5	4	63	53	50	42
Complain to superior	16	13	3	2	24	20	52	44	24	20	16	13	59	50	22	19	8	7	14	12
Spiritual support	38	32	39	32	20	17	10	8	12	10	1	1	-	-	13	11	68	57	37	31

Table No 4.2.30 depicts item wise comparison of interventional -2nd post test scores in the area of ventilation on selected coping behaviors among student nurses.

The data from the above stated item showed that highest percentage of the subjects in the interventional pre-test responded the option of "seldom'' ranging from 2%-44% and in the interventional 2nd post-test responded under the category "often'' ranging from is 3%to 64%. The above stated results clearly shows that the adaptive coping behaviors' were found to be increased in the posttest .From these findings it is interpreted that the adaptive coping behaviors were increased only due to the interventional effectiveness in the post-test.

Table 4.2.31

Paired 't'-test for comparison of pre-test and 2rd-post-test stress scores of nursing students within the control group

n=126

AREA Control group	Control pre-2rd-post-test 't'-test	Control pre-2rd-post-test P-value
Academic stressors	**1.78**	**0.102**
Time balance stressors	**0.69**	**0.53**
Interpersonal stressors	**0.98**	**0.45**
Intrapersonal stressors	**1.63**	**0.105**
Family stressors	**0.56**	**0.571**
Environmental stressors	**0.491**	**0.624**
Overall	**0.84**	**0.492**

Table 4.2.31 depicts paired 't'-test for Comparison of pre-test and 2rd-post-test stress scores of nursing students within the control group. The result reveals the calculated overall 't' value in all areas was 0.84 which is lesser than statistical table value and 'P' value was 0.492. It shows that there is statistically no significant difference between control pre and 2nd post test score at $P < 0.001$ level.

It is inferred that the comparison between the pre-test and post-test stress scores of control group by Paired 't' test showed that there was no significant difference in all components of stress among participants of the control group.

Table 4.2.32

Paired 't'-test for the comparison between Interventional - pre and interventional- 1st,2nd post-test stress scores among student nurses with in the control group.

n=119

AREA	Interventional pre-Interventional post-1		Interventional pre-Interventional post-2	
	't'-value	P-value	't'-value	P-value
Academic stressors	30.18	0.000***	37.81	0.000***
Time balance stressors	23.31	0.000***	27.65	0.000***
Interpersonal stressors	23.62	0.000***	29.44	0.000***
Intrapersonal stressors	13.18	0.000***	16.35	0.000***
Family stressors	1.31	0.192	7.43	0.000***
Environmental stressors	6.945	0.000***	16.44	0.000***
Overall	25.79	0.000***	30.65	0.000***

***** P<0.001**

Table 4.2.32. shows that there was a highly significant difference (P<0.001) found between the pre-test and post test scores in all the areas i.e., academics, time balance, interpersonal, intrapersonal family and environmental stressors in the interventional group.

Further, the overall 't' level in all the areas was 30.65 and the 'P' value was 0.000, which shows a highly significant difference between the pre-test and post test scores of interventional group. This proves that teaching on coping strategies reduces the intensity of stressors.

Table 4.2.33

Paired 't'-test for comparison between control pre and 2nd post-test coping behaviors scores among student nurses within the control group

n=126

AREA	Control pre-2nd post-test 't'-test	Control pre-2nd post test P-value
Time management	**1.72**	**0.246**
Relaxation	**1.12**	**0.263**
Positive thinking	**0.07**	**0.284**
Decision making & problem solving	**2.11**	**0.04***
Ventilation	**0.645**	**0.519**
Overall	**1.87**	**0.231**

Table 4.2.33depicts Paired't'-test for control pre and 2 nd post-test coping behaviors scores among student nurses within the control group.

The result reveals the calculated overall 't' value in all area was 1.87, which is lesser than statistical table value and 'P' value was0.231. It shows that there is statistically no significant difference between control pre and 2nd post-test at P < 0.001 level.

It is revealed that the comparison between the pre-test and post-test coping behaviours scores of control group by Paired 't' test showed that there was no significant difference in the components of coping behaviours other than decision making and problem solving which determines that there was no change in the coping behaviours among the participants of the control group.(t =1.87).

Table 4.2.34

Paired 't'-test for comparison between Interventional - pre and interventional-1st, 2nd post-test coping behaviors among student nurses

n=119

AREA	Interventional pre-Interventional post-1		Interventional pre-Interventional post-2	
	't'-value	P-value	't'-value	P-value
Time management	2.11	0.04*	1.68	0.09
Relaxation	3.67	0.000***	2.86	0.005**
Positive thinking	2.76	0.001**	0.05	0.959
Decision making & problem solving	1.35	0.181	2.97	0.003**
Ventilation	2.38	0.02*	9.24	0.000***
Overall	2.37	0.02*	7.99	0.000***

***P < 0.001

Table 4.2.34. Paired 't'-test for interventional pre and post coping behaviors on coping strategies of student nurses.

The result reveals the calculated overall 't' value in all area was7.99, which is larger than statistical table value and 'P' value was 0.000 and 'P' value was less than 0.000, which shows that there is statistically high significant difference between control pre and 2nd post test at P < 0.001 level. Therefore, research hypothesis H_1 was accepted at P < 0.001 level of significance.

It can be interpreted that the comparison between the pre -test and post -test coping behaviors scores of interventional group by Paired 't' test showed true high significant difference in all the components other than time management and positive thinking. The total post-test coping behaviors scores showed a significant improvement from the pre -test coping behaviors scores at p = 0.000 level (t = 7.99), which determined that there was a change in the coping behaviors among participants in the control group on coping strategies.

Table 4.2.35

Un-paired 't'-test for comparison between control- pre and interventional 1st , 2nd post-test stress score among student nurses

N=245

AREA	Control pre-Interventional post-1		Control pre-Interventional post-2	
	't'-value	P-value	't'-value	P-value
Academic stressors	18.96	0.000***	21.56	0.000***
Time balance stressors	18.68	0.000***	21.07	0.000***
Interpersonal stressors	15.03	0.000***	17.63	0.000***
Intrapersonal stressors	7.09	0.000***	9.54	0.000***
Family stressors	0.15	0.88	6.52	0.000***
Environmental stressors	2.35	0.02*	11.31	0.000***
Overall	16.17	0.000***	19.89	0.000***

***** P<0.001**

Table 4.2.35 explains un-paired 't'-test to find out the significant difference between control 2nd - post and interventional 1st , 2nd, post-test level of stress among student nurses. The result reveals that the calculated overall 't' value in all area was19.89 which is greater than table value of statistic and 'P' value was 0.000, which shows that there is statistically true high significant difference between control pre and interventional I st 2nd post test at P < 0.001 level.. Thus, it infers that the interventional group had higher score in comparison with the control group. These findings proved that there is significant decrease in the level of stress among students in the interventional group than the control group. This suggests that coping strategies might be an effective technique of reducing the level of stress among student nurses.

Table 4.2.36

Un-paired 't'-test for comparison between control 2nd post and interventional-1st ,2nd post-test stress score among student nurses

AREA	Control post - Interventional post-1		Control post - Interventional post-2	
	't'-value	P-value	't'-value	P-value
Academic stressors	10.2	0.000***	12.33	0.000***
Time balance stressors	9.85	0.000***	12.42	0.000***
Interpersonal stressors	9.71	0.000***	12.15	0.000***
Intrapersonal stressors	6.09	0.000***	8.89	0.000***
Family stressors	0.43	0.67	6.98	0.000***
Environmental stressors	1.88	0.07	10.75	0.000***
Overall	9.68	0.000***	13.66	0.000***

***P < 0.001

Table 4.2.36 explains un-paired 't'-test to find out the significant difference between control 2nd - post and interventional 1st ,2nd, post-test level of stress on coping among student nurses. The result reveals that the calculated overall 't' value in all area was13.66,which is greater than table value of statistic and 'P' value was 0.000, which shows that there is statistically true high significant difference between control 2nd post and interventional 2nd post test at P < 0.001 level.. Therefore, research hypothesis H_2 was accepted at P < 0.001 level of significance is accepted.

Thus, it infers that the interventional group had higher score in comparison with the control group. Thus it infers that the interventional group had a higher score when compared to the control group. These findings proved that there is significant decrease in the level of stress among students in the interventional group than the control group. This suggests that coping strategies might be an effective technique of reducing the level of stress among student nurses.

Table 4.2.37

Un-paired 't'-test for comparison betwen control- pre and interventional 1st ,2nd post-test coping behaviors score among student nurses

N=245

AREA	Control pre- Interventional post-1		Control pre- Interventional post-2	
	't'-value	P-value	't'-value	P-value
Time management	1.01	0.312	3.599	0.000***
Relaxation	0.41	0.68	6.46	0.000***
Positive thinking	3.65	0.000***	5.66	0.000***
Decision making & problem solving	3.43	0.000***	4.45	0.000***
Ventilation	2.09	0.037*	13.51	0.000***
Overall	3.07	0.002**	12.09	0.000***

***P < 0.001

The data presented in Table 4.2.37. reveals the Un-paired'-test to find out the significant difference between control pre-test and interventional 1st ,2nd post-test coping behaviors scores of student nurses. The result reveals that the calculated overall 't' value in all the area was 12.09, which is greater than statistical table value and 'P' value was 0.000. Hence, it interpreted that there is statistically true highly significant difference between control pre and interventional 2nd post-test at P < 0.001 level. Hence, research hypothesis H_2 was accepted at P < 0.001 level of significance.

These findings found that there was statistically significant difference between control pre-test and interventional 1st ,2nd post-test coping behaviors scores of nursing students This suggests that coping strategies might be an effective technique of reducing the level of stress among student nurses.

Table 4.2.38

Un-paired 't'-test for comparison between control- 2nd post and interventional- 1st ,2nd post-test score of coping behaviors among student nurses

N=245

AREA	control post - Interventional post-1		control post - Interventional post-2	
	't'-value	P-value	't'-value	P-value
Time management	2.54	0.02*	6.28	0.000***
Relaxation	0.89	0.37	4.89	0.000***
Positive reappraisal	0.21	0.83	3.98	0.000***
Decision making & problem solving	5.51	0.000***	6.38	0.000***
Ventilation	1.18	0.24	10.38	0.000***
Overall	2.45	0.01*	7.99	0.000***

***P < 0.001

The data presented in Table 4.2.38. reveals the Un-paired'-test to find out the significant difference between control post-test and interventional 1st ,2nd post-test coping behaviors scores of student nurses. The result reveals that the calculated overall 't' value in all the area was 7.99,which is higher than statistical table value and 'P' value was 0.000. The calculated 'P' value was less than 0.000 , which proved that there is statistically true highly significant difference observed between control post and interventional 2nd post-test at P < 0.001 level. Therefore, research hypothesis H_2 was accepted at P < 0.001 level of significance.

These findings found that there was statistically significant difference between control post-test and interventional 1st , 2nd post-test coping behaviors scores of nursing students This suggests that coping strategies might be an effective technique of reducing the level of stress among student nurses.

Table 4.2.39

Analysis of variance (ANOVA) on Comparison of differences in pre and post-test stress scores of student nurses between the control and interventional groups at two different points of time

N=245

Group	"F"-value	P-value
Interventional pre, post1and post2	288.3	0.000***
control pre, interventional post1, post2	258.53	0.000***
control 2nd post , interventional post1, post2	133.07	0.000***

***P < 0.001

The data presented in Table 4.3.9 reveals the One way Repeated measures Analysis of variance RM-ANOVA to compare the differences on the level of stress of student nurses between the control and the interventional groups at two different points of time.

Comparison of significance difference in pre –test and post –test stress scores between control and interventional group at two points of time. It was found that nursing students those who were introduced coping strategies had highly significant findings than those who were not introduced (F=258.53. and P= 0.000 at P < 0.001) in control pre , interventional post 1, post 2, Further, similar result was found that that the impact of coping strategies of student nurses was significant at 2 nd post- test than at pre –test (F=133.07and P = 0.000 at P < 0.001).

Table 4.2.40

Analysis of variance (ANOVA) on Comparison of differences in pre and post-test coping behaviours scores of student nurses between the control and interventional groups at two different points of time

N=245

Group	"F"-value	P-value
Interventional pre,post1and post2	5.46	0.005**
control pre ,interventional post1,post2	76.10	0.000***
control 2nd post, interventional post1, post2	16.62	0.000***

***P < 0.001

Comparison of significance difference in pre –test and post –test coping behaviors scores between control and interventional group at two points of time. It was found that nursing students those who were introduced coping strategies had highly significant findings than those who were not introduced (F=258.53 and P = 0.000 at P < 0.001) in control pre, interventional post1, post2 test. Further, similar result was found that that the impact of coping strategies of student nurses was significant at 2nd post- test than at pre –test (F=133.07and P= 0.000) at P < 0.001

Section III

In this section, the findings highlight the correlation between level of stress and coping behaviors of student nurses in control group and interventional group as well as multiple regression for relationship between one depended variable and more than one independent variables of student nurses both in the control and interventional group. The results are presented in Table 4.3.1 to 4.3.5.

Table 4.3.1

Correlation between stress and coping behaviors among student nurses on control group.

Control Group	"r"-value	P-value
Stress post1-coping post2	-0.088	0.339
Stress post2-coping post2	-0.374	0.000***

The findings showed in Table 4.31depicts the correlation between level of stress and coping among student nurses in Control group.

With regard to post-test score, the result shows that the obtained coefficient correlation value in control group (r =-0.088and r=-0.374) indicating that there was possible correlation between the level of stress and coping behaviors since the value was statistically significant at $P < 0.001$ level. Hence it shows that there is a negative correlation between level of stress and coping saying that as the level of stress increases and positive coping behaviors decreases.

Table 4.3.2

Correlation between stress and coping behaviors among student nurses on Interventional group.

Interventional Group	"r"-value	P-value
stress post1-coping post2	-0.16	0.08
stress post2-coping post2	-0.372	0.000***

The findings showed in Table 4.3.2 depicts the correlation between level of stress and coping behaviors among student nurses in interventional group.

With regard to post test score, the result shows that the obtained coefficient correlation value in control group (r =-0.16and r=-0.372) indicating that there was possible correlation between the level of stress and coping since the value was statistically significant at $P < 0.001$ level. Hence it shows that there is a negative correlation between level of stress and coping saying that as the level of stress decreases and positive coping behaviors increases.

Table 4.3.3

Multiple regression between level of stress among student nurses on 2nd post test and their selected demographic variable in control group

Variable	β- coefficient	Std .Error	P-value	95% C.I	
Age	-2.55	3.26	0.436	-9.01	3.91
Sex	- 15.96	9.94	0.11	-35.67	3.74
Religion	0.44	3.70	0.905	-6.89	7.78
Education of mother	2.65	2.95	0.37	-3.19	8.49
Education of father	-4.53	2.86	0.11	-10.20	1.13
Occupation of mother	0.14	2.99	0.96	-5.78	6.08
Occupation of father	3.59	3.02	0.23	-2.40	9.58
Place of residence	4.88	5.91	0.41	-6.83	16.59
Order of sib-ship	-6.90	3.20	0.03	-13.2	-.54
Higher secondary mark	-12.2	2.75	0.000	-17.73	-6.82
Medium of language in schooling	8.37	2.52	0.001	3.37	13.38
Leisure time activities	-1.63	1.64	0.32	-4.89	1.62
Type of sociability	-2.3	2.75	0.39	-7.81	3.09
Social Activities	-0.40	3.61	0.91	-7.56	6.75
Constant	233.7	69.3	0.001	96.31	371.1

(R^2-0.31)

Table 4.3.3 depicts that association between 2nd post test level of stress and their selected demographic variable in control group.

Data shown in Table 4.4.3 depicts that multiple regression between one depended variable (stress scores) and more than one independent variable (selected demographic variables). It was found that overall R^2 was 0.31 and which indicates the effectiveness of coping strategies on stress scores has accounted for 31% of the variance in criterion variable.

Among independent variables, the results shows that there is no statistically significant relationship between stress scores and age, sex, religion, education, and occupation of parents, place of residence, order of sibship, higher secondary marks, medium of language in schooling, leisure time activities, social activities and type of sociability.

Table 4.3.4

Multiple regression between 2 nd post-test level of coping behaviors of student nurses on and their selected demographic variables in control group

Variable	β- coefficient	Std .Error	P-value	95% C.I	
Age	1.88	2.41	0.43	-2.90	6.68
sex	4.16	7.37	0.57	-10.4	18.78
Religion	0.03	2.74	0.99	-5.41	5.47
Education of mother	-6.46	2.18	0.00	-10.79	-2.12
Education of father	7.04	2.12	0.001	2.83	11.24
Occupation of mother	3.67	2.22	0.10	-.72	8.08
Occupation of father	-1.52	2.24	0.499	-5.97	2.92
Place of residence	-1.31	4.38	0.766	-10.00	7.38
Order of sib-ship	1.99	2.38	0.403	-2.72	6.71
Higher secondary mark	5.12	2.04	0.014	1.07	9.17
Medium of language in schooling	-1.72	1.87	0.358	-5.44	1.98
Leisure time activities	-2.17	1.22	0.077	-4.59	.24
Type of personality	2.78	2.04	0.17	-1.25	6.83
Social Activities	-2.95	2.68	0.27	-8.27	2.35
constant	96.31	51.4	0.064	-5.61	198.25

(R^2-0.25)

Data shown in Table 4.3.4 depicts that multiple regression between one depended variable (coping behaviors scores) and more than one independent variable (selected demographic variables). It was found that overall R^2 was 0.31 and which indicates the effectiveness of coping strategies on stress scores has accounted for 31% of the variance in criterion variable.

Among independent variables, the results shows that there is no statistically significant relationship between coping behaviors scores and age, sex, religion, education, and occupation of parents, place of residence, order of sibship, higher secondary marks, medium of language in schooling, leisure time activities, social activities and type of sociability.

Table 4.3.5

Multiple regression between 2 nd post-test level of stress of student nurses and their selected demographic variables in interventional group.

Variable	β- coefficient	Std .Error	P-value	95% C.I	
Age	-.69	2.32	0.76	-5.30	3.90
sex	5.56	4.37	0.27	-3.12	14.24
Religion	-5.4	4.05	0.i8	-13.48	2.59
Education of mother	1.07	2.02	0.59	-2.95	5.09
Education of father	-2.18	2.86	0.44	7.86	3.49
Occupation of mother	-1.7	2.78	0.52	-7.31	3.72
Occupation of father	.91	2.23	0.65	-3.09	4.92
Place of residence	.73	,.78	0.34	-.81	2.28
Order of sib-ship	-3.6	2.40	0.12	-8.4	1.06
Higher secondary mark	.95	2.77	.73	-4.54	6.45
Medium of language in schooling	-2.27	3.69	0.46	-8.40	3.86
Leisure time activities	1.68	.90	.06	-.103	3.47
Type of sociability	-.89	1.89	.64	-4.65	2.87
Social Activities	1.6	2.4	0.94	-4.6	4.94
constant	104.68	44.64	0.021	16.49	193.21

(R^2-0.16)

Data shown in Table 4.3.5 depicts that multiple regression between one depended variable (stress scores) and more than one independent variable (selected demographic variables). It was found that overall R^2 was 0.16 and which indicates the effectiveness of coping strategies on stress scores has accounted for 16% of the variance in criterion variable.

Among independent variables, the results shows that there is no statistically significant relationship between stress scores and age, sex, religion, education, and occupation of parents, place of residence, order of sibship, higher secondary marks, medium of language in schooling, leisure time activities, social activities and type of sociability.

Table 4.3.6

Multiple regression between 2 nd post-test level of coping behaviors of student nurses and **their selected demographic variables in interventional group**

Variable	β- coefficient	Std .Error	P-value	95% C.I	
Age	-0.15	1.06	0.88	-2.27	1.96
sex	2.21	2.01	0.27	-1.79	6.20
Religion	1.09	1.86	0.55	-2.60	4.80
Education of mother	-0.61	0.93	0.51	-2.46	1.24
Education of father	-0.83	1.31	0.53	-3.44	1.78
Occupation of mother	-1.68	1.28	0.19	-4.22	.85
Occupation of father	0.47	0.93	0.61	-1.37	2.3
Place of residence	0.16	0.359	0.65	-.55	.87
Order of sib-ship	1.13	1.1	0.31	-1.06	3.32
Higher secondary mark	0.92	1.27	0.47	-1.61	3.44
Medium of language in schooling	0.7	1.42	0.62	-2.12	3.52
Leisure time activities	0.99	0.41	0.01	.17	1.82
Type of personality	0.33	0.87	0.70	-1.40	2.06
Social Activities	0.45	1.1	0.68	-1.74	2.65
constant	146.81	20.5	0.00	106.05	187.57

(R^2-0.14)

Table 4.3.6 depicts that association between 2nd post test level of coping and their selected demographic variable in interventional group.

Data shown in Table 4.4.6 depicts that multiple regression between one depended variable (coping behaviors scores) and more than one independent variable (selected demographic variables). It was found that overall R^2 was 0.14 and which indicates the effectiveness of coping strategies on stress scores has accounted for 14% of the variance in criterion variable.

Among independent variables, the results shows that there is no statistically significant relationship between coping behaviors scores and age, sex, religion, education, and occupation of parents, place of residence, order of sibship, higher secondary marks, medium of language in schooling, leisure time activities, type of sociability and social activities.

Section IV

This section explains the association of stress and coping behaviors of student nurses with their Demographic variables in control and interventional group

Table 4.4.1

Association between level of stress on control pre –test with their selected demographic variable among student nurses

Demographic variable		Moderate	Severe	χ^2 value	P-value
Age	17	13	48		
	18	12	42		
	19	1	9	4.46	0.33
	21	1	0		
Sex	Male	0	7	2.02	0.34
	female	27	92		
Religion	Hindu	22	86		
	Muslim	0	2	1.53	0.592
	Christian	5	11		
Education of mother	Primary	15	51		
	Secondary	9	31	0.68	0.925
	Higher secondary	2	13		
	Graduate	1	4		
Education of father	Primary	13	37		
	Secondary	3	39	8.19	0.02
	Higher secondary	9	18		
	Graduate	2	5		
Occupation of mother	House wife	20	80		
	Government	4	1		
	Private	2	17	12.62	0.007
	Professional	1	1		
	Business	-	-		
Occupation of father	Coolie	16	83		
	Government	8	7		
	Private	1	5	11.78	0.01
	Professional	1	1		
	Business	1	3		
Place of residence	Urban	6	19	0.12	0.78
	Rural	21	80		
Order of sib-ship	First	11	49		
	Second	12	33	1.14	0.54
	More than second	4	17		
Higher secondary marks:	51-60%	8	26		
	61-70%	2	31	7.65	0.04*
	71-80%	17	40		
	81-90%	0	2		

Medium of language in schooling	Tamil	22	70	1.249	0.333
	English	5	29		
Leisure time activities	Reading Books	6	15	2.52	0.95
	Watching TV	7	22		
	Listening Music	9	37		
	Drawing	3	12		
	gardening	2	7		
	Books & TV	0	1		
	Tv & Music	0	4		
	Books & Tv & Music	0	1		
Type of sociability	Do not mingle with others	3	11	6.04	0.07
	Mingle with selective people	1	24		
	Mingle with everyone	15	45		
	Sometimes mingle and other time may not mingle	8	19		
Social Activities	NSS	17	48	11.45	0.006**
	SNA	5	46		
	Health awareness programme	5	5		

***-P<0.05 Significant**

Table 4.5.1 depicts that association between pre-test level of stress among student nurses and their selected demographic variable in control group.

There was an association found between level of stress with selected demographic variables like marks obtained in higher secondary marks and social activities of student nurses which was statistically significant ($P < 0.05$).

Table 4.4.2

Association between level of stress on control 2nd Post-test with their selected demographic variables among student nurses

Demographic variable		Moderate	Severe	χ^2 value	P-value
Age	17	26	35	4.22	0.211
	18	29	25		
	19	7	3		
	21	1	0		
Sex	Male	2	5	1.36	0.44
	female	61	58		
Religion	Hindu	55	53	0.28	0.894
	Muslim	1	1		
	Christian	7	9		
Education of mother	Primary	37	29	6.13	0.109
	Secondary	19	21		
	Higher secondary	7	8		
	Graduate	0	5		
Education of father	Primary	29	21	17.21	0.000***
	Secondary	11	31		
	Higher secondary	20	7		
	Graduate	3	4		
Occupation of mother	House wife	48	52	7.212	0.059
	Government	5	0		
	Private	10	9		
	Professional	0	2		
	Business	-	-		
Occupation of father	Coolie	50	49	6.34	0.179
	Government	10	5		
	Private	1	5		
	Professional	0	2		
	Business	2	2		
Place of residence	Urban	15	10	1.25	0.372
	Rural	48	53		
Order of sib-ship	First	29	31	1.45	0.522
	Second	21	24		
	More than second	13	8		
Higher secondary marks:	51-60%	11	23	24.01	0.000***
	61-70%	9	24		
	71-80%	41	16		
	81-90%	2	0		
Medium of language in schooling	Tamil	50	44	2.23	0.163
	English	13	21		

Leisure time activities	Reading Books	8	13		
	Watching TV	23	6		
	Listening Music	17	29		
	Drawing	4	11		
	gardening	7	2		
	Books & TV	1	0	22.33	0.001 **
	Tv & Music	2	2		
	Books & Tv & Music	1	0		
Type of sociability	Do not mingle with others	9	5		
	Mingle with selective people	7	18		
	Mingle with everyone	34	26	7.08	0.065
	Sometimes mingle and other time may not mingle	13	14		
Social Activities	NSS	36	29		
	SNA	17	34	16.4	0.000***
	Health awareness programme	10	0		

***-P<0.05 Significant**

Table 4.4.2 depicts that association between 2nd post-test level of stress and their selected demographic variable in control group.

There was an association found between level of stress with education of father, higher secondary marks obtained, leisure time activities and social activities of student nurses which was statistically significant ($P < 0.05$).

Table 4.4.3

Association between level of stress on Interventional Pre-test with their selected demographic variables among student nurses

Demographic variable		Moderate	Severe	Very Severe	χ^2 value	P-value
Age	17	3	67	0	5.48	0.35
	18	3	34	2		
	19	0	9	0		
	21	0	1	0		
Sex	Male	2	16	0	1.95	0.446
	female	4	95	2		
Religion	Hindu	5	103	2	2.06	0.48
	Muslim	0	3	0		
	Christian	1	5	0		
Education of mother	Primary	1	42	2	6.5	0.387
	Secondary	2	42	0		
	Higher secondary	3	23	0		
	Graduate	0	4	0		
Education of father	Primary	0	35	2	8.28	0.163
	Secondary	6	67	0		
	Higher secondary	0	8	0		
	Graduate	0	1	0		
Occupation of mother	House wife	5	102	0	18.59	0.007**
	Government	-	-	-		
	Private	1	9	2		
	Professional	-	-	-		
	Business	-	-	-		
Occupation of father	Coolie	4	100	2	6.43	0.211
	Government	0	4	0		
	Private	1	4	0		
	Professional	1	3	0		
	Business	-	-	-		
Place of residence	Urban	3	27	0	2.76	0.337
	Rural	3	84	2		
Order of sib-ship	First	2	69	2	3.32	0.45
	Second	3	33	0		
	More than second	1	9	0		
Higher secondary marks:	51-60%	0	5	0	5.78	0.21
	61-70%	5	47	0		
	71-80%	1	59	2		
	81-90%	-	-	-		
Medium of language in schooling	Tamil	4	80	0	6.46	0.055
	English	0	33	2		

Leisure time activities	Reading Books	2	34	0	11.11	0.342
	Watching TV	0	27	2		
	Listening Music	1	22	0		
	Drawing	1	7	0		
	gardening	1	15	0		
	Books & TV	0	1	0		
	Tv & Music	1	4	0		
	Books & Tv & Music	0	1	0		
Type of personality	Do not mingle with others	0	4	0	7.69	0.289
	Mingle with selective people	2	29	2		
	Mingle with everyone	3	30	0		
	Sometimes mingle and other time may not mingle	1	48	0		
Social Activities	NSS	3	68	2	2.72	0.739
	SNA	3	33	0		
	Health awareness programme	0	10	0		

***-P<0.05 Significant**

Table 4.4.3 depicts that association between pretest test level of stress and their selected demographic variable in interventional group.

There was an association found between level of stress with occupation of mother of student nurses which was statistically significant ($P < 0.05$).

Table 4.4.4

Association between level of stress on Interventional 2nd –Post-test with their selected demographic variables among student nurses

Demographic variable		≤mean	>mean	χ^2 - value	P-value
Age	17	26	44	1.88	0.596
	18	14	25		
	19	4	5		
	21	1	0		
Sex	Male	10	8	2.84	0.092
	female	35	66		
Religion	Hindu	39	71	5.57	0.06
	Muslim	1	2		
	Christian	5	1		
Education of mother	Primary	20	24	4.99	0.172
	Secondary	15	29		
	Higher secondary	7	19		
	Graduate	3	1		
Education of father	Primary	14	20	1.77	0.623
	Secondary	27	46		
	Higher secondary	3	5		
	Graduate	1	0		
Occupation of mother	House wife	38	68	2.31	0.129
	Government	0	0		
	Private	7	5		
	Professional	0	0		
	Business	0	0		
Occupation of father	Coolie	39	67	0.56	0.905
	Government	2	2		
	Private	2	3		
	Professional	0	0		
	Business	2	2		
Place of residence	Urban	15	15	2.53	0.112
	Rural	30	59		
Order of sib-ship	First	24	48	1.91	0.385
	Second	16	20		
	More than second	5	5		
Higher secondary marks:	51-60%	5	2	4.28	0.118
	61-70%	20	30		
	71-80%	20	42		
	81-90%	0	0		
Medium of language in schooling	Tamil	28	54	3.21	0.2
	English	17	18		

Leisure time activities	Reading Books	18	18		
	Watching TV	9	19		
	Listening Music	12	11		
	Drawing	5	3		
	gardening	0	16	19.18	0.014*
	Books & TV	0	1		
	Tv & Music	1	5		
	Books & Tv & Music	0	1		
Type of sociability	Do not mingle with others	2	2		
	Mingle with selective people	13	20		
	Mingle with everyone	17	16	5.57	0.134
	Sometimes mingle and other time may not mingle	13	36		
Social Activities	NSS	20	51		
	SNA	15	13	21.54	0.000***
	Health awareness programme	0	10		

***-P<0.05 Significant**

Table 4.4.4 depicts that association between **2** nd post-test level of stress and their selected demographic variable in interventional group.

There was an association found between level of stress with leisure time activities and social activities of student nurses which was statistically significant ($P < 0.05$).

Table 4.4.5

Association between level of coping on control pre-test with their selected demographic variable among student nurses

Demographic variable		Mild	Moderate	χ^2 value	P-value
Age	17	4	57	1.24	0.886
	18	5	49		
	19	0	10		
	21	0	1		
Sex	Male	0	7	0.57	0.45
	female	9	110		
Religion	Hindu	7	101	0.917	0.42
	Muslim	0	2		
	Christian	2	14		
Education of mother	Primary	6	59	1.95	0.796
	Secondary	3	37		
	Higher secondary	0	15		
	Graduate	0	5		
Education of father	Primary	3	47	1.28	0.855
	Secondary	3	39		
	Higher secondary	3	24		
	Graduate	0	7		
Occupation of mother	House wife	8	92	2.97	0.278
	Government	1	4		
	Private	0	19		
	Professional	0	2		
	Business	-	-		
Occupation of father	Coolie	7	92	2.62	0.76
	Government	1	14		
	Private	0	6		
	Professional	0	2		
	Business	1	3		
Place of residence	Urban	4	22	3.36	0.086
	Rural	5	95		
Order of sib-ship	First	5	55	1.95	0.47
	Second	4	41		
	More than second	0	21		
Higher secondary marks:	51-60%	1	33	4.16	0.24
	61-70%	1	32		
	71-80%	7	50		
	81-90%	0	2		
Medium of language in schooling	Tamil	8	84	0.26	0.728
	English	2	32		

Leisure time activities	Reading Books	1	20		
	Watching TV	2	27		
	Listening Music	2	44		
	Drawing	2	13		
	gardening	2	7	5.14	0.455
	Books & TV	0	1		
	Tv & Music	0	4		
	Books & Tv & Music	0	1		
Type of sociability	Do not mingle with others	0	13		
	Mingle with selective people	0	25		
	Mingle with everyone	6	54	4.2	0.241
	Sometimes mingle and other time may not mingle	3	25		
Social Activities	NSS	5	59		
	SNA	2	50	4.05	0.195
	Health awareness programme	2	8		

***-P<0.05 Significant**

Table 4.4.5 depicts that association between pre-test test level of coping and their selected demographic variable in control group.

There was no association found between level of coping behaviors with age, sex, religion, education, and occupation of parents, place of residence, order of sibship, higher secondary marks, medium of language in schooling, leisure time activities.

Table 4.4.6

Association between level of coping on control 2nd post-test with their selected demographic variable among student nurses

Demographic variable		Mild	Moderate	Good	χ^2 value	P-value
Age	17	6	54	1	35.14	0.041*
	18	5	47	2		
	19	3	7	-		
	21	-	-	1		
Sex	Male	1	6	0	0.302	0.86
	female	13	102	4		
Religion	Hindu	11	95	2	6.84	0.145
	Muslim	0	2	0		
	Christian	3	11	2		
Education of mother	Primary	4	58	3	13.65	0.033*
	Secondary	6	34	0		
	Higher secondary	2	12	0		
	Graduate	2	2	1		
Education of father	Primary	5	43	2	7.14	0.213
	Secondary	7	35	0		
	Higher secondary	1	25	1		
	Graduate	1	5	1		
Occupation of mother	House wife	12	85	3	15.89	0.286
	Government	0	5	0		
	Private	2	17	0		
	Professional	0	1	1		
	Business	-	-	-		
Occupation of father	Coolie	10	86	3	21.96	0.134
	Government	1	14	0		
	Private	1	5	0		
	Professional	0	1	1		
	Business	2	2	0		
Place of residence	Urban	2	21	3	7.65	0.04*
	Rural	12	87	1		
Order of sib-ship	First	8	49	3	3.01	0.533
	Second	4	41	0		
	More than second	2	18	1		
Higher secondary marks:	51-60%	1	32	1	23.17	0.015*
	61-70%	8	24	1		
	71-80%	5	51	1		
	81-90%	0	1	1		
Medium of language in schooling	Tamil	9	79	4	2.02	0.364
	English	5	29	0		

Leisure time activities	Reading Books	0	21	0		
	Watching TV	4	22	3		
	Listening Music	5	40	1		
	Drawing	2	13	0		
	gardening	1	8	0	18.75	0.185
	Books & TV	1	0	0		
	Tv & Music	1	3	0		
	Books & Tv & Music	0	1	0		
Type of sociability	Do not mingle with others	2	10	1		
	Mingle with selective people	4	20	1		
	Mingle with everyone	4	54	2	4.19	0.445
	Sometimes mingle and other time may not mingle	4	24	0		
Social Activities	NSS	3	58	3		
	SNA	11	40	1	10.13	0.095
	Health awareness programme	0	10	0		

***-P<0.05 Significant**

Table 4.5.6 depicts the association between **2nd** post-test level of coping and their selected demographic variable in control group.

There was an association found between level of stress with age, education of mother, place of residence and higher secondary marks of student nurses which was statistically significant ($P < 0.05$).

Table 4.4.7

Association between level of coping on interventional pre-test with their selected demographic variable among student nurses

Demographic variable		Mild	Moderate	χ^2 value	P-value
Age	17	3	67	0.523	0.914
	18	2	37		
	19	0	9		
	21	0	1		
Sex	Male	0	18	0.93	0.335
	female	5	96		
Religion	Hindu	4	106	2.54	0.33
	Muslim	0	3		
	Christian	1	5		
Education of mother	Primary	2	42	5.42	0.2
	Secondary	2	42		
	Higher secondary	0	26		
	Graduate	1	3		
Education of father	Primary	1	33	24.09	0.000**
	Secondary	2	71		
	Higher secondary	1	7		
	Graduate	1	0		
Occupation of mother	House wife	3	103	5.08	0.08
	Government	-	-		
	Private	2	10		
	Professional	-	-		
	Business	-	-		
Occupation of father	Coolie	4	102	4.74	0.31
	Government	0	4		
	Private	0	5		
	Professional	-	-		
	Business	1	3		
Place of residence	Urban	2	28	0.61	0.599
	Rural	3	86		
Order of sib-ship	First	3	69	1.01	0.574
	Second	1	35		
	More than second	1	9		
Higher secondary marks:	51-60%	2	5	11.36	0.01*
	61-70%	2	48		
	71-80%	1	61		
	81-90%	-	-		
Medium of language in schooling	Tamil	2	82	2.35	0.151
	English	3	32		

Leisure time activities	Reading Books	2	34		
	Watching TV	1	27		
	Listening Music	1	22		
	Drawing	1	7		
	gardening	-	16	2.61	0.795
	Books & TV	-	1		
	Tv & Music	-	6		
	Books & Tv & Music	-	1		
Type of sociability	Do not mingle with others	0	4		
	Mingle with selective people	2	31		
	Mingle with everyone	3	30	4.56	0.176
	Sometimes mingle and other time may not mingle	0	49		
Social Activities	NSS	3	68		
	SNA	2	36	0.54	0.76
	Health awareness programme	0	10		

***-P<0.05 Significant**

Table 4.4.7 depicts the association between pre-test level of coping behaviors and their selected demographic variable in interventional group.

There was an association found between level of coping behaviors with education of father and higher secondary marks of student nurses which was statistically significant ($P < 0.05$).

Table 4.4.8

Association between level of coping behaviors' on interventional post-test with their selected demographic variable among student nurses

Demographic variable		≤mean	>mean	χ^2 value	P-value
Age	17	36	34		
	18	22	17		
	19	2	7	4.401	0.221
	21	1	0		
Sex	Male	10	8	0.16	0.692
	female	51	50		
Religion	Hindu	54	56		
	Muslim	2	1	2.96	0.227
	Christian	5	1		
Education of mother	Primary	23	21		
	Secondary	21	23		
	Higher secondary	16	10	2.43	0.487
	Graduate	1	3		
Education of father	Primary	17	17		
	Secondary	38	35	1.08	0.78
	Higher secondary	4	4		
	Graduate	0	1		
Occupation of mother	House wife	55	51		
	Government	0	0		
	Private	6	6	0.01	0.901
	Professional	0	0		
	Business	0	0		
Occupation of father	Coolie	55	51		
	Government	1	3		
	Private	3	2	1.28	0.735
	Professional	2	2		
	Business	0	0		
Place of residence	Urban	15	15		
	Rural	46	43	0.025	0.873
Order of sib-ship	First	38	34		
	Second	19	17	0.598	0.741
	More than second	4	6		
Higher secondary marks:	51-60%	4	3		
	61-70%	24	26		
	71-80%	33	29	0.41	0.816
	81-90%	0	0		
Medium of language in schooling	Tamil	40	42		
	English	19	16	1.86	0.397

Leisure time activities	Reading Books	20	16	13.05	0.11
	Watching TV	10	18		
	Listening Music	10	13		
	Drawing	4	4		
	gardening	12	4		
	Books & TV	0	1		
	Tv & Music	5	1		
	Books & Tv & Music	0	1		
Type of sociability	Do not mingle with others	1	3	4.18	0.242
	Mingle with selective people	14	19		
	Mingle with everyone	16	17		
	Sometimes mingle and other time may not mingle	30	19		
Social Activities	NSS	35	36	1.53	0.463
	SNA	19	19		
	Health awareness programme	7	3		

***-P<0.05 Significant**

Table 4.4.8 depicts the association between post-test level of coping behaviors and their selected demographic variable in interventional group.

There was no association found between level of coping behaviors with age, sex, religion, education, and occupation of parents, place of residence, order of sibship, higher secondary marks, medium of language in schooling, leisure time activities.

CHAPTER 5

DISCUSSION

This chapter presents discussion part of this study according to the results, obtained from statistical analysis based on the literature review, objectives, hypotheses and findings of this study.

Stress has been defined as a barrier to concentration, problem solving, decision making, and other necessary abilities for students' learning; it also has some symptoms and illnesses in the students such as depression and anxiety. In reviewing stress and its consequences, the methods of coping with stress in the method of response to it would be more important than the nature of stress itself.

A student may face many challenges and stressors. Among these the student nurses are likely to experience more stress than their friends and colleagues enrolled in other programme. Some stress is normal but it becomes a problem when it impairs the student's studies and personnel life.[49] Research studies show that nursing is a high stress level occupation, where the nursing student faces challenging situations that often influence both his learning process and health conditions.[50]

Stress-inducing academic demands include grade competition; lack of time and issues relating to time or task management the need to adapt to new learning environments in terms of the increased complexity of the material to be learned and the greater time and effort required to do so; and the need to constantly self-regulate and to develop better thinking skills, including learning to use specific learning techniques. Another category that evokes stress is social adjustment, particularly adjusting to university life and separating from family and friends. Finally, there are financial pressures and other technical difficulties [41]

Top five major sources of stress were detected among nursing college students: change in sleeping habits, vacations, breaks, and change in eating habits, increased work load, and new responsibilities. Furthermore, stress may result from being separated from home for the first time, the transition from a personal to an impersonal academic environment, and the structure of the academic experience at the college level.[68]

The aim of coping strategies administration is used to help individuals restructure their thoughts, which in turn should improve the way, the person feels about particular stressful situation, plan their time appropriately, solve their problem and able to lead a productive life. Though we heard a lot about stress and coping behaviours among Student Nurses from the West, it is not as such studied in our Indian Culture. So the researcher felt the need of assessing the stressors, level of stress and coping behaviours employed by the Students in response to stressful situations.

Secondly the freshers were not aware of coping strategies in the first year itself. If they become aware of adaptive coping strategies, they can be able to lead a life smoothly in the after coming years. Due to their ignorance, some maladaptive strategies can be used by them. In order to make the Student to appraise the event or occurrences cognitively positive and to facilitate the Student's success, the researcher has planned to teach about adoptive coping strategies like Time management, Positive thinking, Relaxation, problem solving and decision making and ventilation of emotions.

The primary aim of this present study was to evaluate the effectiveness of coping strategies on the level of stress and coping behaviours of student nurses in selected nursing institutions, Tamil Nadu.

Totally six nursing institutions were selected according to the need of this study which were included from Madurai, Viruthunagar and Pudukottai districts, Tamil Nadu. In order to achieve the objectives of this study, a quasi- interventional study of before and after control group design was adapted and purposive sampling technique was used to select samples. The data was collected from 245 I year B.Sc. Nursing Degree students before and the after exposure to teaching programme by 5 point likert scale developed by the researcher.

The obtained data were entered into the master sheet for tabulation and statistical processing. The findings of this study are discussed in terms of objectives and hypotheses. The findings of the study were compared and contrasted in different aspects of study variables. The analysed data was discussed under the following headings:

5.1.Development of the instrument

5.2.Distribution of samples according to their Demographic variables.

5.3 Effectiveness of coping strategies on the level of stress and coping behaviours of student nurses.

5.3.a) Distribution of the subjects based on their stress level before and after coping strategies in control and interventional group.

5.3..b) Distribution of the subjects based on their pre -test and post -test level of coping behaviours on coping strategies in the control and interventional groups**.**

5.3.c) Area wise distribution of mean, SD and mean percentage of pre and post-test mean scores in control and interventional group regarding effectiveness of coping strategies on the level of stress of student nurses.

5.3.d) Area wise distribution of mean, SD and mean percentage of pre and post-test mean scores in control and interventional group regarding level coping behaviours on coping strategies among student nurses .

5.3e) Item wise comparison of control pre -post test scores for the subscales of level of stress among student nurses in the control and interventional groups

5.3.f) Item wise comparison of pre-test and post -test scores for the subscales of level of coping behaviors of student nurses in the control and interventional groups.

5.3.g) comparison of differences between the pre -test and post -test mean scores in evaluating effectiveness of coping strategies on the level of stress and coping behaviours of nursing students within the control and interventional group.

5.3.h) comparison of differences on the level of pre –test and 2nd-post -test scores in evaluating effectiveness of coping strategies on the level of stress and coping behaviours nursing students between the control and interventional groups.

5.3.i) comparison of the differences on the level of stress and coping behaviours of student nurses between the control and interventional groups at two different points of time.

5.4.Relationship between level of stress and coping behaviours of student nurses

5.4.a) Correlate the student nurses level of stress and coping behaviours in control group

5.4.b) Correlate the student nurses level of stress and coping behaviours in interventional group

5.4.c) Multiple regression for relationship between one depended variable and more than one independent variables of student nurses both in the control and interventional groups.

5.5.Association between stress and coping behaviours of student nurses in the control and interventional groups with their demographic variables during the pre –test and post -test.

5.5.a) Associate the level of stress among student nurses in the control and interventional groups with their demographic variables.

5.5.b) Associate the level of coping behaviours among of student nurses in the control and interventional groups with their demographic variables.

5.1.Development of the instrument

The researcher found that there was standardized instruments available in the western culture and there is no evidence for validated and standardized instruments available regarding stress and coping assessment in the Indian context. Hence, the researcher developed a tool appropriate to the nursing profession within the Indian context.

In this present study, **t**he following instruments were developed by the researcher with the help of an extensive review of literature from various resources and based on the objectives of this study. The developed tools comprised four parts as follows:

i. Demographic variables

ii. 5 point Likert scale on stress

iii. 5 point Likert scale on coping behaviours

iv. Teaching module on “Coping strategies”

The content validity of the instrument was evaluated by a panel of fifteen experts and it was determined as follows:

- The prepared tool (Part I, Part II and Part III) along with objectives, hypotheses, operational definitions, blueprint and criteria checklist were given to experts and requested to give their valuable suggestions regarding accuracy, relevance and appropriateness of the content. There were two response columns against each item in the questionnaires-namely, 'agree' and 'disagree' along with a column for remarks and suggestions of the evaluator. The evaluator was asked to put '√ ' against above mentioned columns. The validated tool was received from the 13 judges in the field of Nursing, Medicine, clinical psychology, Education and Bio-Statistics with their valuable opinion.

The reliability of the instrument was established by administering the instrument to 78 I year B.Sc. degree student nurses from both the control and interventional groups during the pilot study. The reliability of these instruments were tested and presented as follows:

- Reliability of the 5 point likert scale on stress (Part II) was this tool reliability was tested by internal consistency**.** The internal consistency test was tested by Cronbach-Alpa. The reliability was $\alpha = > 0.75$.. It shows statistically significant and thus reliable
- Reliability of the 5- Point Likert scale on coping behaviours (Part III) was too tested by internal consistency**.** The internal consistency test was tested by Cronbach-Alpa. The reliability was. $\alpha = > 0.78$ It shows statistically significant and thus reliable.

5. 2.Distribution of samples according to their demographic variables:

Analysis of the demographic data revealed that the student nurses from both groups were similar in most respects and it is presented as follows:

a) Age :

Regarding age of student nurses, highest percentage 70(59%) in the interventional and 61(48%) and control were in the age of 17 years. 39 (33%) and 54(43%) from both the groups falls in the age group of 18 years and least 1(1%) from both the groups belong to the age group of 21 years.

b) Gender:

Almost a similar proportion of student nurses 101(85%) and 119(94%) from both the groups were females and 18(15%) from interventional group and 7(6%) from the control group were males.

Thus, it can be interpreted that majority of the students in two groups were females because females mostly like this nursing profession than males.This was similar to a study conducted by Mary Lelia Baker[115] on student nurses stress and demographic factors in which she had 133 males and 21 females as samples.

c) Religion:

With regard to the religion, majority of them from both the groups, i.e.) 110(92%) and 108(86%) belongs to Hindu religion and minimum subjects 3(3%) from interventional group and 2(2%) from control group belongs to Muslim religion. This finding is consistent with a study done by Charanjeev Singh, Sunita Sharma and Ravinder Kumar on the level of stress coping behaviour in which majority of the subjects (54.5%) of them were hindus.[32]

d) Education of mother

While seeing the education of mother, majority of them i.e.) 37(31%) from the interventional group completed their secondary level of education and 50(40%) from the control group completed their primary level of education and least number of samples 1(1%) and 7(6%) from both the groups finished their graduate level of education.

e) Education of father

With regard to the education of father, maximum subjects from interventional group i.e.) 73(61%) have completed their secondary level of education and from the control group, 50(40%) have completed their primary level of education. Only very few members 1(1%) and 7(6%) from the former and later group have completed their graduate level.

f) Occupation of mother

While portraying the occupation of mother, 107(90%) from the interventional group followed by 12(10%) of them doing private job. Analyzing the occupation of mother, 100(79%) from the control group were housewives and only few subjects 2(2%) were professionals.

g) Occupation of father

With regard to the occupation of father, majority 106(89%) from the interventional group and 99(78%) from the control group were coolie workers. In the interventional group minimum subjects of 4(3%) were doing business and in the control group 2(2%) were professionals

h) Place of residence

While seeing the place of residence in the interventional group, 88(75%) belongs to the rural background followed by 31(25%) belongs to the rural background. Likewise in the control group, majority of them 101(80%) belongs to the rural background followed by 25(20%) of them belongs to the urban background.

i) Order of sib-ship

With regard to the order of sib-ship, majority 73(61%) from the interventional group and 60(48%) from the control group were the first ones in their family followed by least number of subjects, 10(9%) in the interventional group and 21(16%) from the control group were the third ones in their family

j) Higher secondary marks

While seeing the marks obtained in Higher Secondary, majority of them from the interventional group and control group, i.e.) 62(52%) and 57(45%) have obtained 71-80% of marks. Only few samples, 5(4%) from the interventional group have obtained 51-60% of marks the and only 2(2%) have obtained 81-90% of marks from the control group

k) Medium of language in school

While seeing the medium of language, majority of them from the interventional group and control group, i.e.) 84(71%) and 92(73%) have studied in Tamil medium. Only few samples, 35 (29%) from the interventional group and, 34(27%) have hailed from Tamil medium in the control group.

l) Leisure time activities

While seeing the leisure time activities, majority of samples in interventional group, 36(30%) have the habit of reading books and minimum 1(1%) have the habit of reading books, watching Television and the same 1(1%) have the habit of watching television and listening to music. In the control group, 46(36%) have the habit of listening to music and least samples 1(1%) have the habit of watching television and listening to music.

m) Type of sociability

Regarding the type of sociability, majority of samples in the interventional group 49(41%) sometimes mingle and other times may not mingle with others and minimum samples 4(3%) do not mingle with others. Likewise in the control group, 60(48%) mingles with others and minimum subjects, 14(11%) don't mingle with others.

n) Social activities

While seeing the involvement of students in social activities, majority of them, 73(61%) in the interventional group and 65(52%) in the control group involved in NSS activities

5.3. Effectiveness of coping strategies on the level of stress and coping behaviours of student nurses.

5.3.a) Distribution of the subjects based on their stress level before and after coping strategies in control and interventional group.

It was observed in the control pre-test, out of 126 students, none of them had very severe stress but majority 99(79%) had severe stress and 27(21%) had moderate stress. Likewise in interventional group, out of119 students 2(2%) had very severe stress, 111(93%) had severe stress and 6(5%) had moderate stress 99(79%) had

moderate stress and no one experienced mild stress. This may be due to the lack of awareness about the coping strategies to overcome stress by the student nurses.

However in interventional group, after the training all the subjects, 119(100%) experienced moderate stress and none of them had severe and very severe stress. These findings proved that there is a significant decrease in the level of stress among the students who had training on coping strategies. Therefore this result clearly proved the effectiveness of coping strategies in reducing the intensity of stress. In other words, students who received training on coping strategies exhibited lesser level of stress than students in the control group.

These findings were consistent with the findings by a study done by Richman CL, Brodish J, Haas F and Billings C[104] to examine the effect of designated interventions in nursing practice problems on levels of burnout in nurses. A battery of tests measuring burnout, self-esteem, depression, personal accomplishment, depersonalization, and emotional exhaustion were given to nurses in interventional and control groups. Pre- and post-test data were gathered for both groups. The treatment included a 2-day conference which was designed as a respite experience to address problems specific to the nursing profession. Results indicate significantly less burnout, less frequency of depersonalization, and significantly greater frequency of personal accomplishment in the scores of the interventional group relative to the control group. This study shows that specific interventions can be used to benefit the emotional well-being of nurses by providing them with a respite opportunity and the skills to manage key stressors in their professional environment.

5.3.b) Distribution of the subjects based on their pre-test and post-test level of coping behaviours on coping strategies in the control and interventional groups

Depiction of pre and post-test levels of coping behaviours in control and Interventional group among student nurses result reveals that in control group, in pre-test that 9(7%) had moderate and 117(93%) had good coping and 4(3%) coped excellently and in the post-test 14(11%) coped moderately, 108, (86%) had good coping and 4(3%)coped excellently since majority of the samples mingles with everyone and might share their feelings which is an effective coping technique.

However, in interventional group in pre-test that 5(4%) had moderate coping, 114(96%) had a good coping and 2(2%)coped excellently and in the post-test 117(98%) had a good coping and 4(3%)coped excellently which shows an improvement in the post test Thus higher the level of coping proves the effectiveness of teaching on coping strategies among student nurses.

The study findings were supported by a study done by Hamdan-Mansour AM, Puskar K, Bandak AG[107] who examined the effectiveness of cognitive behavioural therapy (CBT) with university students suffering from moderate to severe depressive symptoms in Jordan. Eighty-four university students were recruited and assigned randomly to control and intervention groups. Intervention impact was assessed on measures of depressive symptoms, perceived stress, and coping strategies at three time points; baseline, post-intervention, and 3-months post-intervention. The interventional model used was the Modified Teaching Kids to Cope (MTKC), and the control group received no treatment. Overall, using CBT showed a significant improvement in the outcome measures. At post intervention, students had lower scores on perceived stress, lower depressive symptoms, less use of avoidance coping strategies, and more use of approach coping strategies.

5.3.c) Area wise distribution of mean, SD and mean percentage of pre and post-test mean scores in control and interventional group regarding effectiveness of coping strategies on the level of stress of student nurses.

Mean scores in control group reveal the overall difference in mean percentage of 2nd post - test and pre - test was 54% and 53% respectively, indicates only 1% of differences with the mean score (133.9±24.4and 131.6±28.3) in all the subscales of stress level. Thus, it is inferred that there was a small change in stress level of student nurses in the control group, since there was small difference between control pre and post-test mean scores.

In interventional group, the overall 2nd post -test mean percentage scores 37% was decreased from pre -test mean percentage scores, revealing a difference of 26% and with mean scores (158.9±18.6and 91.25±15.85) respectively. Highest difference 34% was found in the subscale of "time balance stressors with post -test mean score (21.49±3.1 and 11.31.±2.71) of the control and interventional group respectively. It is statistically proved that the comparison of mean post-test stress scores was lower than mean pre-test stress scores in all the subscales f stress. Therefore, the interventional post-test mean scores clearly showed that there was a significant reduction 0f 26% in stress level of student nurses in the interventional group during post-test. Hence, it is clearly showed that the teaching on coping strategies is effective in reducing the level of stress among student nurses.

An overall mean percentage in the interventional 2nd post-test was 37%, which is lower than the overall mean score of control 2nd post-test 53%, indicating differences of 16% with the mean score (131.6±28.3and 91.25±15.85) in all the subscales of stress level. Highest difference 21% was found in the subscale of " time balance stressors" and interpersonal stressors with post -test mean score (17.76±5.01, 11.31±2.71 and 19.49±6.22, 12.16±2.22) of the control and

interventional group respectively. As per the results, the comparison between control and interventional post-test mean scores of stress level showed statistically high significant difference in all the subscales of it. Thus, it can be interpreted that the stress level of student nurses in the interventional group had 12%-21% of reduction in stress level which is greater than the nursing students of the control group. Hence, it is again clearly showed that training on coping strategies has an impact in reducing the stress level among student nurses.

The findings were supported by a study done by Davazdahemami MH, Roshan R, Mehrabi A, Atari A et al,[31] titled as "reviewing the effectiveness of stress management training in cognitive-behavioral technique on blood sugar and depression of patients with type II diabetes" indicated that stress management training program could reduce the depression mean score of the patients in the follow-up step, which this reduction was significant as compared with the control group.

Therefore, it was statistically proved that participants who had awareness on the management of stress had reduction in the stress level than participants who did not participate in it.

5.3.d) Area wise distribution of mean, SD and mean percentage of pre and post-test mean scores in control and interventional group regarding coping behaviours on coping strategies among student nurses.

In the control group, 0% of the overall mean difference with the a mean percentage of 56% in both the pre-test and post-test respectively, regarding all the subscales coping behaviours of nursing students. The results indicate the comparison between control pre-test and post -test mean coping behaviours scores showed that there was small differences of maximum of 3% and minimum of 1% difference in different subscales of it and overall mean difference of 0% in it. The findings

indicated that the level coping behaviours of the student nurses were similar in both pre -test and post-test.

In the interventional group, the overall mean percentage was high in post – test of 62% as compared to pre- test of 59%, revealing a difference of 3%. Further, it was confirmed that the mean post -test coping behaviour score was significantly higher than pre -test coping behaviour score (154.81 and 148.1), which shows a significant improvement in the mean post -test coping behaviour score .It denotes that coping strategies training has an impact over the changes in the coping behaviours of student nurses.

Differences in mean percentage of control post –test and interventional post -test score was 62% and 56% respectively, which shows an overall 6% of difference with the mean and SD score (140.21± 11 and 154.81± 2.52) in all the subscales regarding coping behaviours of nursing students . Thus, it was found out that student nurses of the interventional group had more adaptive coping behaviours than that of the control group**.**

The above findings were supported by a study conducted by Hirokawa, Yagi and Miyata[114] examine the effects of a stress management program for college students of social work on their perception of mental stress and stress coping strategies. Cognitive-behavioral therapy may change the cognitive appraisal that a stimulus is harmful. Participants in a stress management program may perceive their life events to be less stressful. No effect of gender was found, but limited number of males attended the study. Cognitive skills may help highly anxious persons restructure their thinking patterns such as that an event is perceived to be less harmful.

5.3.e) Item wise comparison of control pre –post-test scores for the subscales of level of stress among student nurses in the control and interventional groups

In the control group, among all the subscale of stressors, , majority of the subjects in the control pre-test responded under the category "sometimes'' score ranged from 26% to 40 % and 2nd post test responded 33% to 43 % under the category "seldom'' respectively in the area of interpersonal stressors which shows that there was no differences between the pre and post-test.

In the interventional group, the highest percentage of the subjects in the interventional pre-test responded the option of "some times'' ranging from 29%-43% and in the interventional2nd post-test responded under the category "seldom'' ranging from is 41%to 66%. The results clearly proves the effectiveness of the interventions.

5.3.e) Item wise comparison of control pre –post-test scores for the subscales of level of coping behaviours among student nurses in the control and interventional groups.

Regarding coping behaviours of the control group, majority of subjects in the sub scale of all behaviours especially relaxation, in the control pre-test responded the option of "seldom'' ranging from 11%-48% and in the control 2nd post-test responded under the category "often'' ranging from is 21%to 37%. I t was found that the stressors were found to be the increased in post-test than the pre-test.

In the subscale of time management, highest percentage of the subjects in the interventional pre-test responded the option of often ranging from 1%-47% and in the interventional2nd post-test responded under the category "often'' ranging from is 1%to 71% which shows that the adaptive coping behaviours were found to be increased in the post-test

In the interventional group, the highest percentage of the subjects in the subscale of problem solving and decision making of post-test test responded the

option of “never’’ ranging from 1%-38% and in the interventional 2nd post-test responded under the category “often’’ ranging from 2%to 69% in which adaptive coping behaviours were found to be increased in the post-test. From those findings it is proved that the adaptive coping behaviours were increased only due to the interventional effectiveness in the post-test.

5.3.f) Paired’-test for the comparison of differences between the pre-test and post-test mean scores in evaluating effectiveness of coping strategies on the level of stress and coping behaviors of nursing students within the control and interventional group.

Comparison between the pre-test and post-test stress scores of control group by Paired 't' test, it was observed that the calculated overall ‘t’ value in all area was 0.84, which is lesser than statistical table value and ‘p’ value was 0.492. It shows that there is statistically no significant difference between control pre and 2nd post-test score at $P < 0.001$ level. It is inferred that the comparison between the pre -test and post -test stress scores of control group by Paired 't' test showed that there was no significant difference in total scores and scores in each subscales of stress , which determined that there was no change in the stress level of the participants in the control group. It may be related to lack of awareness about adaptive coping behaviours.

The present findings was in contrast to a study done by Bittman BB, Synder C, Bruhn KT, Liebfried F, Stevens SK,Westengard J. et al,[29] conducted a prospective cross over study, to examine the impact of a 6-session Recreational Music-making (RMM) protocol on burnout and mood dimensions as well as Total Mood Disturbance (TMD) in 75 first year associate degree student nurses from Allegany college of Maryland. Burnout and mood dimensions were assessed with the Maslac Burnout Inventory and the profile of Mood States respectively. This study shows that a

statistically significant reduction of multiple burnout and mood dimensions as well as total mood disturbance scores in first year associate degree student nurses. All this study finding shows importance and effectiveness of stress management program on student nurses. This may be due to lack of awareness on coping strategies among student nurses.

Comparison between the pre-test and post-test coping behaviours scores of control group by Paired 't' test showed that the calculated overall 't' value in all subscale was 1.87, which is lesser than statistical table value and 'P' value was 0.231. It shows that there is statistically no significant difference between control pre and 2nd post-test at $P < 0.001$ level. It was interpreted that there was no significant difference in all the subscales of coping behaviours which determined that there was no change in the coping behaviours of the participants in the control group ($t = 1.87$). It is evident that it is due to the lack of awareness about adaptive coping in the initial period of nursing programme.

This findings were consistent with a comparative study done by Sundaram S[28] on stress among 30 first year and 30 fourth year B.Sc student nurses in Chennai. The study revealed that the first year B.Sc. Student nurses had comparatively more stress and less coping than the final year B.Sc. Student nurses. The researcher suggests orientation classes for the newcomers and to conduct well organized guidance and counselling services to help the student nurses to carry on their course of study with less stress and adequate coping.

Hypothesis I (H_1)

The first research hypothesis stated that there is a significant difference between before (pre-test scores) and after (post-test scores) giving teaching on

coping strategies on the level of stress and coping behaviours of student nurses in the interventional group.

Comparison of pre and post-test scores by Paired 't'-test was calculated to analyze the effectiveness , the overall 't' value 30.65 was high as compared to statistical table value and 'P' value was 0.000, which interpreted that statistically true highly significant difference was observed between interventional - pre and interventional - 1^{st} ,2^{nd} post-test at $P < 0.001$ level. Therefore, research hypothesis H_1 was accepted at $P < 0.001$ level of significance. It is proved that the total post-test stress scores showed a significant effect compared with the pre -test stress scores at $p = 0.000$ level ($t = 30.65$) at $P<0.001$ which reveals a significant reduction in the stress scores of the participants in the interventional group. The reason could be due to the teaching on adaptive coping strategies. That finding was supported by study conducted by van der JJ Klink, Blonk RW, Schene AH and van Dijk FJ[95] to determine the effectiveness of occupational stress-reducing interventions and the populations for which such interventions are most beneficial. Methods used was inclusion of Forty-eight interventional studies (n = 3736) in the analysis. Four intervention types were distinguished: cognitive-behavioral interventions, relaxation techniques, multimodal programs, and organization-focused interventions. Results shows that a small but significant overall effect was found. A moderate effect was found for cognitive-behavioural interventions and multimodal interventions, and a small effect was found for relaxation techniques. The effect size for organization-focused interventions was non significant. Effects were most pronounced on the following outcome categories: complaints, psychological resources and responses, and perceived quality of work life. It is concluded that Stress management

interventions are effective. Cognitive-behavioral interventions are more effective than the other intervention types.

Comparison of pre and post-test scores of coping behaviours by Paired 't'-test was calculated to analyze the effectiveness calculated overall't' value in all areas was 1.87, which is lesser than statistical table value and 'P' value was0.231. It shows that there is statistically no significant difference between control pre and 2nd post test at $P < 0.001$ level.

Difference between interventional pre and 2nd post-test coping behaviours score reveals that the computed overall paired 't' value in all subscale was 7.99, which is greater than statistical table value and 'P' value was 0.000, which showed a significant increase in the total post -test coping behaviours scores as compared to pre -test coping behaviours scores in the interventional group at $P < 0.001$ level. Therefore, research hypothesis H_1 was accepted at $P < 0.001$ level of significance. Therefore it determined that there was a change in coping behaviours of students after exposure to the training programme. This study finding emphasizes the need of training in their initial period.

This was consistent with an experimental study to assess the effectiveness of 10 sessions, 5 week stress management program among 18 student nurses of Texas Women's University, Canada. It included sessions on progressive relaxation, deep muscle relaxation and visual imagery. 10 student nurses served as the experimental group and the remaining as the control group. State and trait anxiety measures were taken prior to midterm and final examinations. The results revealed that, the stress management group effectively reduced trait anxiety ($P < 0.05$), while the control group's levels remained relatively unchanged. The experimental group showed a reduction in state anxiety from the mid semester to final examinations, while the

control group showed a slight increase in the same. It was concluded that stress management program is an effective way to reduce stress among student nurses.[99]

The stated hypothesis (H_1) supported in the view of the above findings of the present study shows that there was a significant decrease in the level of stress and an increase in the adaptive coping behaviours among the student nurses who participated in the teaching on adaptive coping strategies than the student nurses who did not participate and the hypothesis (H_1) is accepted.

Hypothesis 2 (H_2)

The second research hypothesis stated that there was a significant difference in the stress and coping behaviours scores between student nurses who underwent the training and those who did not participate in it.

5.3.g) Comparison of differences on the level of pre –test and 2nd-post -test scores in evaluating effectiveness of coping strategies on the level of stress and coping behaviors nursing students between the control and interventional groups.

A statistically high significant difference in the stress was level observed between control pre -test and interventional 2nd post-test ('t' =19.89), at $P < 0.001$ level. Therefore, research hypothesis H_2 was accepted at $P < 0.001$ level of significance. These findings found that there is statistically significant decrease in the level of stress scores among students in the teaching group. This suggests that coping strategies have significant impact in the enhancement of stress scores among student nurses.

Comparison between control 2nd - post and interventional 1st, 2nd post -test level scores in evaluating effectiveness of coping strategies on stress level shows the obtained overall 't' value 13.66 was greater than statistical table value and 'P' value was 0.000, which is interpreted that there is statistically true highly significant

difference observed between control 2nd post and interventional 2nd post -test at P < 0.001 level. Therefore, research hypothesis H_2 was accepted at P < 0.001 level of significance. Thus, it infers that the interventional group had higher score as compared to the control group. These findings prove that there is a significant decrease in the level of stress among students in the training group than those who did not participate. This suggests that coping strategies might be an effective approach for improving the adaptive coping behaviours and reducing the level of stress among student nurses However, the contrast result in the control group may be related to unawareness of adaptive coping strategies in their initial period of training. This finding was consistent with the study done by Hirokawa,Yagi and Miyata[115] who examined the effects of a stress management program for college students of social work on their perception of mental stress and stress coping strategies. Cognitive-behavioral therapy may change the cognitive appraisal that a stimulus is harmful. Participants in a stress management program may perceive their life events to be less stressful. No effect of gender was found, but limited number of males were attended the study. Cognitive skills may help highly anxious persons restructure their thinking patterns such that an event is perceived to be less harmful. The present program focused more on relaxation training than on modification of cognitive skills.

The findings found that there was a statistically significant difference between control pre -test and interventional 1st , 2nd post -test coping behaviours scores of nursing students (t'=12.09, 'P' =0.000) at P < 0.001 level. Hence, research hypothesis H_2 was accepted at P < 0.001 level of significance. This suggests that teaching on coping strategies has a significant impact in increasing coping behaviour level of student nurses.

Comparison of significant differences between the control- post and interventional- post–test coping scores of nursing students ,reveals that the overall 't' value was7.99,which is higher than statistical table value and 'P' value was 0.000.Hence, research hypothesis H_2 was accepted at $P < 0.001$ level of significance. The results proved that there is statistically true highly significant difference observed between control 2nd post and interventional 2nd post-test at $P < 0.001$ level. It clearly explains the importance of coping strategies in improving the general wellbeing and decreasing the stress among student nurses.

The above findings were consistent with a study done by Archer[83], a multidimensional stress management model was used for a preventive program for college students. The model was presented in a course format and included sessions in three general stress management areas - physical, cognitive and lifestyle. 86 undergraduates were either participated to stress 7 0 management course, career choice and career decision making course. Results indicated that students in the stress management class had significantly greater mean gain scores than students in the control classes in 4 of the behaviour rating areas - regular relaxation, situational relaxation, aerobic exercise, and positive self statement.

5.3.h) Comparison of the differences on the level of stress of student nurses in the control group at two different points of time.

Comparison of significance difference in pre–test and post–test stress scores between control and interventional group at two points of time. It was found that student nurses those who were introduced coping strategies had highly significant findings than those who were not introduced ($F=258.53$. and $p= 0.000$ at $P < 0.001$) in control pre, interventional post1, post2 test. Further, similar result was found that that the impact of coping strategies of student nurses was significant at 2 nd post-

test than at pre –test (F=133.07and P = 0.000 at P < 0.001) Indicating the intervention is of benefit. Therefore this result clearly explains the effectiveness of coping strategies in reducing the stress level and improving coping behaviors of student nurses.

5.3.i) A Comparison of differences on coping behaviours of student nurses in the interventional groups at two different points of time.

A Comparison of significance difference in pre –test and post –test stress scores between control and interventional group at two points of time. It was found that student nurses those who were introduced coping strategies had highly significant findings than those who were not introduced (F=258.53. and p= 0.000 at P < 0.001), Further, similar result was found that that the impact of coping strategies of student nurses was significant at 2nd post- test than at pre–test (F=133.07and P = 0.000 at P < 0.001

Similar findings were reported by Diane.K.Leggette[35] stating the effectiveness of a brief mindfulness breathing intervention to decrease stress and ultimately the risk for depression while increasing self-efficacy with clinical skills performance in a 1st-year student nurse population. Participants were recruited from an associate degree nursing program at a northwestern university. Data gathered included demographic information, depression scores, physiological measures (i.e., blood pressure and pulse), self-efficacy scores, and skills performance scores. The design was a two-group (interventionaland no-treatment control) true interventionalrandomized control trial with the following four repeated measures: (a) pretest, (b) posttest, (c) 2-month follow-up test, and (d) 4-month follow-up test. Data collection took place from November 2009 to March 2010. The sample (N = 85) was predominantly female (87.1%, n = 74) and Caucasian (89.4%, n = 86). Fifty-six of the participants were

married and 46% of the participants identified themselves as parents of children still living at home. Analyses of variance demonstrated a greater mean decrease for the intervention group than for the treatment-as-usual group following the mindfulness breathing intervention for depression, F (1,82) = 6.864, P = .010; systolic, F (1,81) = 6.557, P = .012; and diastolic, F (1,81) = 6.078, P = .016--measures indicating the intervention may be of benefit. Pulse did not reach statistical significance. Analyses of variance for mindfulness, self-efficacy, and skills performance did not reach significance. Correlations conducted on measures indicated that as depression decreased, systolic and diastolic measures also decreased. As mindfulness increased, self-efficacy increased, and as self-efficacy increased, skills performance also increased. These results suggest that mindfulness may be of benefit as a method to decrease the risk for depression while contributing to increased self-efficacy and skills performance in a student nurse population.

As stated in hypothesis (H_2) it was found in this present study of the above findings of the present study shows that there was a significant decrease in the level of stress and increase in the coping behaviours among the student nurses who participated in the teaching on coping strategies than the student nurses who did not participate. Thus the hypothesis ($H_{2)}$ is accepted. The present investigator's findings emphasize the need of coping strategies teaching for student nurses in their initial period.

5.4. Relationship between stress of student nurses and coping behaviours of student nurses

Hypothesis 3 (H_3)

The third research hypothesis stated that there was a significant correlation between stress student nurses and the coping behaviours in both control and interventional groups.

5.4.a) Correlate the stress and coping behaviours of student nurses in the control group

With regard to post-test score, the result shows that the obtained coefficient correlation value in control group (r =-0.374)) respectively which indicates that there was possible association between the level of stress and coping since the value was statistically significant at $P < 0.001$ level. Hence it shows that there is a negative correlation between level of stress and coping saying that as the level of coping decreases, level of stress will increase.

5.4.b) Correlate the stress and coping behaviours of student nurses in the control group

With regard to post-test score, the result shows that the obtained coefficient correlation value in interventional group (r =-0.372) which indicates that there was possible association between the level of stress and coping since the value was statistically significant at $P < 0.001$ level. Hence it shows that there is a negative correlation between level of stress and coping saying the coping increases the level of stress will decrease.

Hence, it is interpreted that as the students uses maladaptive coping, level of stress will be increased and when adaptive coping is used, the level of stress will be decreased.

These findings were supported by another study conducted in China to explore the factors affecting psychological status and stress, coping style and social support of the student nurses during their initial clinical experience. The method adopted was co-relational study in which 288 student nurses were included and assessed by 'adopting college seniors stress scale', 'coping style questionnaire' and 'support questionnaire'. The result of the study shows that positive correlations were found between stressful events and negative coping style, the negative correlations related to psychological condition of student nurses. It is very necessary to enhance the social support and encourage them to adopt positive coping style.[36]

There was a correlation between the stress level of student nurses and their coping behaviours in both the groups.

Hence, research hypothesis H_3 is accepted at $P < 0.001$ level.

5.4.c) Multiple regression for relationship between one depended variable and more than one independent variables of student nurses both in the control and interventional groups.

In control and interventional groups, effectiveness of coping strategies on stress and coping behaviours level was found but was associated with the demographic variables.

It is interpreted that there is no relationship was found between student nurses' stress and coping behaviours level with demographic variables.

5.5. Association between stress as well as coping behaviours of student nurses in the control and interventional groups with their demographic variables during pre–test and post-test.

Hypothesis 4 (H_4)

The fourth research hypothesis stated that there was a significant association between the stress of student nurses with their selected demographic variables.

5.5.a) Associate the stress level of student nurses in the control and interventional groups with their demographic variables.

It was found that there was a significant association found between control protest level of stress with marks obtained in higher secondary examination and social activities of student nurses and post-test level of stress with education of father, higher secondary marks, leisure time activities and social activities of student nurses which was statistically significant ($P < 0.05$). This may be due to the fact that marks obtained in higher secondary examination, leisure time activities and social activities may influence the stress and coping saying that increase of higher secondary marks, involvement in leisure time activities, social activities and imparting knowledge to their children by the parents reduces the stress and increase the coping level.

On the other hand, in the interventional group too, there was an association found between stress score and education of mother in pre-test of student nurses which was statistically significant ($P < 0.05$). The result of this study was in contrast to another study to determine if there is a difference in the perceived stress levels and the coping styles of junior and senior students in nursing and social work programs. The study used a descriptive comparative approach and was non experimental. The sample consisted of 89 student nurses and 33 social work students. Responses indicated that social work students have significantly higher perceived stress levels than student nurses. Student nurses identified more Reliance on approach coping responses, while social work students identified more Reliance on avoidance coping responses. No significant differences were identified between the two groups based on age, gender, marital status, employment status or class.[37]

This may be due to the fact that higher educational status of mother play a role in teaching positive coping behaviours to their wards from the beginning so that they

might have a positive thinking and right perception which helps in reducing stress and positive coping behaviours.

The above stated hypothesis (H_4) is found that there was a significant association found between pre and post-tests level of stress of student nurses and their demographic variables in the control group and interventional groups. Hence, research hypothesis H_4 is accepted at $P < 0.001$ level.

Hypothesis 5 (H_5)

The fifth research hypothesis stated that there is a significant association between the coping behaviours of student nurses with their selected demographic variables.

5.5.b) Associate the coping behaviours of student nurses in the control and interventional groups with their demographic variables.

It was found that there was no significant association found between control 2nd post-test level of coping behaviours with the demographic variables like education of mother, place of residence, higher secondary marks and age of nursing student which was statistically significant ($P< 0.05$).

On the other hand, in the interventional group, there was an association found between coping behaviours score and education of father and marks obtained in higher secondary examination in the pre-test of student nurses which was statistically significant ($P < 0.05$) The above stated hypothesis (H_5) it is found that there was significant association found between pre and post-test level of stress of student nurses and their demographic variables in the control group and interventional groups. Hence, research hypothesis H_5 is accepted at $P < 0.001$ level.

CHAPTER VI

SUMMARY, CONCLUSION AND RECOMMENDATIONS

Stress is an integral part of life, especially for a college student. In fact, not all stress is bad. At times little stress makes us to become more alert and aware of our surroundings, or causes us to take more time with a course project. This can be beneficial. But when one recognizes that the stress is detrimental to one's life, we need to take action. There are a number of techniques to help college students to minimize the stress they are feeling. Managing stress will help them cope with the daily pressures of college and give them more time and energy to enjoy their college experience. Stress is a life event that causes imbalance in a person's life. An unhealthy response to stress occurs when the demands of the stressor exceed the person's coping ability.

It is well known that stress is highest among students and adolescents. During their college years students experience constant challenge and demand for adjustment and change. Along with academic pressures, students are seeking independence and autonomy from their parents and responsibilities, acceptance from their peer in a world of mixed values. Nursing is a profession where we are dealing with human beings. Student Nurses join the profession during their teenage. Student nurses during their academic lives have to fulfil their clinical practice as a requirement of curriculum due to which they are exposed to various life situations, which are stressful. When students are exposed to the clinical set up for the first time the main stressors which are identified are academic stressors ,personnel inadequacy, fear of making errors, uncertainty, interpersonal conflict with other peer nurses,intra personal stressors financial problems and environmental stressors. Student nurses are also

scared or frightened of senior nurses, supervisors, clinical instructor and doctors and they also have a fear of failure .The ward environment is very demanding in nature, the students as beginners are unable to manage as they lack experience and skill. Hence, student nurses during initial experience in the clinical area find it difficult to balance their stress. Several studies show that student nurses have high level of stress. It is also seen that initial clinical experience is very stressful for first year students. If the stressors are identified and interventions are provided at the earliest, many physical and psychological consequences of stress can be reduced and student nurses will be able to lead an effective life So as teachers in nursing it is necessary to have a better understanding of student stress and help them to cope in a positive way.

This chapter is divided into three sections; the summary of the study, the summary of the study findings and conclusions are presented.

6.1.a) Summary of the study

This present study was undertaken to assess the effectiveness of coping strategies on the level of stress and coping behaviours among nursing students from selected institutions, Tamil Nadu.

This was a quasi- experimental study of before and after control group design conducted for a period of one year in the selected six nursing institutions from Madurai, Viruthunagar and Pudukottai districts, Tamil Nadu. The I year B.Sc. nursing degree students from six different nursing institutions were included as interventional (n=119) and control group (n=126) through purposive sampling technique. The tool used for data collection was a structured questionnaire developed by the researcher. The conceptual framework of this study based upon Imogene King's Goal attainment Model (1981)which is based on the concepts of personal, interpersonal and social system including perception, judgment, action, reaction, transaction and feedback..

The objectives of this study were to:

- To assess the pre-test level of stress and coping behaviours among Student Nurses in interventional and control group.
- To assess the post-test level of stress and coping behaviours among Student Nurses in interventional and control group.
- To evaluate the effectiveness of coping strategies on the level of stress and coping behaviours among Student Nurses
- To find out the relationship between the stress and coping behaviours in interventional and control group.
- To find out the association between the stress with selected demographic variables of interventional and control group
- To find out the association between the coping behaviors with selected demographic variables of interventional and control group

HYPOTHESES

The researcher attempted to test the following hypotheses at 0.01 level of significance.

H_1: There is a significant difference between pre-test and post-test level of stress and coping behaviours among Student Nurses in the interventional group.

H_2: There is a significant reduction in the level of stress and increase in the level of coping behaviours among student nurses in the interventional group compared to the students in control group.

H_3: There is a significant correlation between the level of stress and coping behaviours among Student Nurses

H_4: There is a significant association between the level of stress among Student Nurses with selected demographic variables

H_5: There is a significant association between the level of coping among Student Nurses with selected demographic variables

6.1.b) Summary of the study findings

Regarding distribution of subjects based on their demographic variables, the result is interpreted as follows:

1. Regarding age of student nurses, highest percentage 70(59%) in the interventional and 61(48%) and control were in the age of 17 years. While seeing the gender, similar proportion of student nurses 101(85%) and 119(94%) from both the groups were females. With regard to the religion, majority of them from both the groups, i.e.) 110(92%) and 108(86%) belongs to Hindu religion. While portraying the education of mother, majority of them i.e.) 37(31%) from the interventional group completed their secondary level of education and 50(40%) from the control group completed their primary level of education. With regard to the education of father, maximum subjects from interventional group i.e.) 73(61%) have completed their secondary level of education and from the control group, 50(40%) have completed their primary level of education. While portraying the occupation of mother, 107(90%) from the interventional group followed by 12(10%) of them doing private job. Analyzing the occupation of mother, 100(79%) from the control group were housewives. With regard to the occupation of father, majority 106(89%) from the interventional group and 99(78%) from the control group were coolie workers. While seeing the place of residence in the interventional group and control group majority of them, 88(75%) and 101(80%) belongs to the rural background. With regard to the order of sib-ship, majority 73(61%) from the interventional group and 60(48%) from the control group were the first ones in their family. While seeing the

marks obtained in Higher Secondary, majority of them from the interventional group and control group, i.e.) 62(52%) and 57(45%) have obtained 71-80% of marks. While seeing the leisure time activities, majority of samples in interventional group, 36(30%) have the habit of reading books and majority, 46(36%) have the habit of listening to music. Regarding the type of sociability, majority of samples in the interventional group 49(41%) sometimes mingle and other times may not mingle with others. Likewise in the control group, 60(48%) mingles with others. While seeing the involvement of students in social activities, majority of them, 73(61%) in the interventional group and 65(52%) in the control groups involved in NSS activities.

2. With regard to the distribution of the subjects based on their stress level before and after coping strategies in control and interventional group, it was observed that among 119 students in the interventional group, after the coping strategies training, relatively a high proportion of the subjects 119(100%) experienced moderate stress and none of them had severe and very severe stress during the 2 nd post -test, which is very higher than that of the 1 st post-test, whereas majority in the control group (n= 126) had moderate and severe stress 63 (50%), during their 2 nd post –test.

3. While portraying the distribution of the subjects based on their pre -test and post -test level of coping behaviours on coping strategies in the control and interventional groups, the result reveals significant findings that among 126 subjects in the control group, in pre-test that 9(7%) had moderate ,and 117(93%) had good coping and 4(3%) coped excellently and in the post-test 14(11%)coped moderately, 108, (86%) had good coping and 4(3%)coped excellently since majority of the samples mingle with everyone and might share

their feelings which is an effective coping technique. However, in interventional group of pre-test shows that 5(4%) had moderate coping, 114(96%) had good coping and 2(2%)coped excellently and in the post test 117(98%) had good coping and 4(3%)coped excellently which shows an improvement in the post-test Thus higher the level of coping proves the effectiveness of teaching on coping strategies among student nurses.

4. Regarding the area wise distribution of mean scores on stress scores of student nurses. Mean scores in control group reveals that an overall difference in mean percentage of 2nd post - test and pre- test was 54% and 53% respectively, indicates only 1% of differences with the mean score (133.9±24.4and 131.6±28.3) in all the subscales of stress. In the interventional group, the overall 2nd post -test mean percentage score 63% was increased from pre -test mean percentage scores revealing a difference of 37% with mean scores (158.9±18.6and 91.25±15.85) respectively.

5. Regarding area wise distribution of mean scores on coping behaviours of student nurses. Regarding Student nurses in the control group, 0% of the overall mean difference with the a mean percentage of 56% in both the pre-test and post-test respectively in all the subscales of coping behaviours of nursing students. Similarly, differences in mean percentage of control post –test and interventional post -test score was 59% and 62%respectively, which observed an overall 6% of difference with the mean and SD score (140.21±11 and 154.81±2.52)in all the subscales regarding coping behaviours of nursing students.

6. Regarding the item wise comparison for the subscales scores on stress of student nurses. In the control group, among all the subscale of stressors, majority of the subjects in the control pre-test responded under the category sometimes score ranged from 26% to 40 % and 2nd post-test responded 33% to 43 % under the category seldom respectively in the area of interpersonal stressors. While in the interventional group, highest percentage of the subjects in responded the option of some times ranging from 29%-43% and in the interventional 2nd post test responded under the category seldom ranging from is 41%to 66%. The results clearly prove the effectiveness of the interventions.

In coping behaviours of the control group too, majority of subjects in the sub scale of relaxation in the control pre-test responded the option of seldom ranging from 11%-48% and in the control 2nd post-test responded under the category often ranging from is 21%to 37%. It was found that the stressors were found to be the same in pre and post-test and In the subscale, highest percentage of the subjects in the interventional pre-test responded the option of often ranging from 1%-47% and in the interventional2nd post-test responded under the category often ranging from is 1%to 71% which shows that the adaptive coping behaviours were found to be increased in the post-test. From those findings it is proved that the adaptive coping behaviours were increased only due to the interventional effectiveness in the post-test With regard to item wise comparison for the subscales scores on coping behaviours of student nurses of the control group, majority of subjects in the control pre-test responded the option of seldom ranging from 11%-48% and in the control 2nd post-test responded under the category often ranging from is 21%to 37%. I t was found that the stressors were found to be the same in pre and post-test and highest percentage of the

subjects in the interventional pre-test responded the option of often ranging from 1%-47% and in the interventional2nd post-test responded under the category often ranging from is 1%to 71% which shows that the adaptive coping behaviours were found to be increased in the post-test

7. Regarding comparison of differences on stress as well as coping of nursing students within the control and interventional group

Comparison between the pre-test and post-test stress scores of control group by Paired 't' test, It was observed that the calculated overall 't' value in all area was 0.84, which is lesser than statistical table value and 'p' value was 0.492. It shows that there is statistically no significant difference between control pre and 2nd post-test stress score at $P < 0.001$ level. Comparison of pre and post-test scores to analyze the effectiveness, the overall 't' value 30.65 was high as compared to statistical table value and 'P' value was 0.000, which interpreted that statistically true highly significant difference was observed between interventional- pre and interventional- 1st , 2nd post -test at $P < 0.001$ level. Therefore, research hypothesis H_1 was accepted at $P < 0.001$ level of significance. Therefore, research hypothesis H_1 was accepted.

Comparison of pre and post-test scores by Paired 't'-test was calculated to analyze the effectiveness calculated overall 't' value in all areas was 1.87,which is lesser than statistical table value and 'p' value was 0.231. It shows that there is statistically no significant difference between control pre and 2nd post-test at $P < 0.001$ level Difference between interventional pre and 2nd post -test coping behaviours score reveals the computed overall paired 't' value in all subscale was 7.99, which is greater than statistical table value and 'p' value was 0.000, which showed a significant improvement in the total post -

test coping behaviours scores as compared to pre -test coping behaviours scores in the interventional group at $P < 0.001$ level. Therefore, research hypothesis H_1 was accepted at $P < 0.001$ level of significance.

8. Regarding comparison of differences on stress as well as coping of nursing students between the control and interventional groups.

   Comparison between control 2nd - post and interventional 1st, 2nd post-test level scores in evaluating effectiveness of coping strategies on stress shows the obtained overall 't' value is 19.89 which was greater than statistical table value and 'P' value was 0.000, which is interpreted that there is statistically true highly significant difference observed between control 2nd post and interventional 2nd post -test at $P < 0.001$ level. Therefore, research hypothesis H_2 was accepted at $P < 0.001$ level of significance. Comparison of significant differences between the control- post and interventional- post –test coping scores of nursing students, reveals that the overall 't' value was12.09, which is higher than statistical table value and 'P' value was 0.000.Hence, research hypothesis H_2 was accepted at $P < 0.001$ level of significance.

9. Regarding correlation between stress and coping of student nurses with regard to pre-test correlation score, the result shows that the obtained coefficient correlation value in the control ($r = -0.0374$) and the interventional($r =- 0372$) group indicate that there was negative correlation between stress and coping, since the value was statistically significant at $P < 0.001$ level. Hence H3 was accepted $P<0.001$ level of significance. Hence H3 was accepted at $P < 0.001$ level of significance.

10. Regarding relationship of stress and coping of student nurses with their demographic variables during the pre –test and post -test. In control and

interventional groups, effectiveness of coping strategies on stress and coping behaviours level was found but not associated with the demographic variables. It is interpreted that no relationship was found between student nurses' stress and coping behaviours level with demographic variables.

11. With regard to association between stress and coping behaviours of student nurses with their demographic variables.

    Regarding association between stress and coping of student nurses with their demographic variables, was found that there was a significant association found between control pre-test level of stress with marks obtained in higher secondary examination and social activities of student nurses and post-test level of stress with education of father, higher secondary marks, leisure time activities and social activities of student nurses which was statistically significant ($P < 0.05$). Hence research hypothesis H4was accepted.

    On the other hand, in the interventional group too , there was an association found between stress score and education of mother in pre-test of student nurses which was statistically significant ($P < 0.05$).Hence, research hypothesis H_5 is accepted at $P < 0.001$ level.

6.2. Limitations

- The limitation in this study is the small sample size for generalizing the findings to the entire nursing programs.
- The use of a purposive sampling technique is another limitation to this study, which greatly limits its generalizability.
- Another limitation is that this study was conducted at selected nursing institutions in Tamil Nadu only and the results can only be generalised to those areas with a similar make-up.
- Due to the time limitation only few coping strategies were implemented.

6.3. Impact of the study

Stress is a multidimensional phenomenon which is focused on dynamic relationship between the individual and the environment. It is also defined as a stressor, individual's response to the stimuli and interaction between the individual and the environment. It should be noted that some degree of stress can be effective on increasing and improving individuals' performance. Evidences indicate that most of the human successes are created in stressful conditions; but high rate of stress would followed by numerous consequences, including mental and physical illnesses, sleep disorders, restlessness, irritability, forgetfulness, abnormal fatigue, reduced individual's resistance and recurrent infections, headaches, poor concentration, memory impairment and reduce in problem solving ability. In general, everyone experiences the stress, but students are a group of people who are at the higher risk of stressors due to the transitional nature of the student life; because they need to adjust themselves with the life environment which requires compliance with new social norms and new friendship. Accordingly, their perception from an event is affected as a stressor and selecting coping strategies which they use them in the particular situations. These groups should cope with the increasing global demands i.e. decision making about issues such as occupation, life style, friends, family, religion and politics. They should also meet the needs of family, teachers, friends and other groups; therefore, they establish important emotional ties with the environment or non-family members and also establish their own value systems which, in most of the cases, influenced by the family and the culture they have been belonged to. Various types of stress causes the reduction of individual's resistance through the negative effect which apply on the person's social and individual coping resources and in long-term can have unpleasant effects on student's physical and mental health. It was

indicated that stress can cause mental and physical illnesses, dysfunction and adjustment disorder and ultimately reduction of students' quality of life.

The findings of the present study indicated that management training program of student nurses can promote the mental health and improve academic achievement and provide clinical services in the hospital by the students. The role of the psychiatric nursing department should not be ignored here, because they can have a valuable role in reduction the stress and facilitate the students learning, So according to the results of the present study, holding stress management programmes in different courses and implementing psychotherapy training programs can improve the mental health of the students.

6.4 Implications

6.4.a) Nursing Education

- The curriculum of basic nursing should include lessons on consequences of stress on the body and stress management in detail.
- Student nurses should be given adequate exposure and training regarding coping strategies with respect to stress management.
- The nurse educators should supervise and guide the students to improve their coping skills.
- The students need to be taught evidence based practices and keep their knowledge up-to-date.
- Nurse educators can periodically organize special training programmes to the staff nurses in order to educate the patients
- Coping strategies can be included for the 1 st year .B sc (N), GNM, P. B sc (N) and M.sc psychiatric student nurses in their cumulative record book by the nurse educators.

6.4.b) Nursing Practice

- The nurses should be periodically evaluated to assess their knowledge and practice regarding stress management
- In-service education has to be planned according to the needs of the nurses in managing stress by non pharmacological methods.
- Different types of in-service educational programmes and orientation courses have to be conducted for the staff nurses from time to time.

6.4.c) Nursing Administration

- The nurse administrator can organize and conduct in-service education and continuous nurse education programmes for nurses in order to manage stress of patients.
- Nurses need to be trained in coping skills which helps them to impart the technique under the guidance of nurse.

6.4.d) Nursing Research

- Nurse researcher should conduct researches on ways to manage stress among student nurses. This will provide scientific data and adds more scientific knowledge to nursing profession.
- The nurse researcher should conduct workshops, seminars, and poster sessions and should publish research findings in journals to communicate findings to nursing professionals.

6.5. Conclusion

It is clear from the results of this study that these student nurses are exposed to a variety of stressors from academic and clinical perspectives. Effectively managing stress is a priority for first-year student nurses. Overall time management

for the students will determine their ability to successfully negotiate their way through the remaining years of their program. Including holistic care studies for student nurses have shown to result in the ability to study better, better sleeping habits and general health improvement. Requiring stress management within the nursing curriculum assists nurses with teaching coping techniques to clients and hospital visitors. An effective nursing program provides ongoing stress management workshops during the academic year. There are unique interpersonal and environmental stressors for student nurses. Stressors specific to nursing college students can be addressed by educational administrators. Administrators can address these with an assigned counselling faculty that supports at-risk students. They are essential for managing the workload of nurses but can also directly contribute to the care of their clients. Insufficient knowledge about stress coping techniques is the primary barrier to its implementation. Implementation of these coping techniques within an academic program better prepares nurses for a professional career.

For student nurses away from home, creating a support system may fall last in their list of priorities. Providing support within the academic system may involve group and individual counselling as well as direct access to resources. Creating a support system with family and friends is a primary stress reduction technique because having the ability to enjoy time away from nursing and studies supports self-care. Nurses must prioritize their own care amid the other care they are required to provide. A positive outcome of these study findings indicate that the coping strategies appeared to be more effective in reducing the level of stress for student nurses. The researcher concludes that the nursing curriculum should implement teaching strategies whereby student nurses can be empowered to promote positive intrapersonal and interpersonal skills and able to lead a productive life. Providing students with a first

year course that addresses some of the issues pertaining to the experience of first year student will assist students to manage their stress.

6.6.Recommendations

- A study on effectiveness of specific coping strategy can be done.
- A comparative study to assess the effectiveness of coping strategies and any other stress management like guided imagery on reduction of stress can be done to implement appropriate stress management techniques to reduce stress among student nurses.
- Replication of the study at different setting could be carried out with a larger sample size.
    i. It is also recommended to conduct further research studies to discover more effective strategies to promote the general well being of student nurses.
    ii. In addition, longitudinal studies to study the patterns of coping behaviours among student nurses at different periods during their course time.

BIBLIOGRAPHY

1. Stranks JW. Stress at work: Management and prevention. Butterworth-Heinemann Press ; 2005; 7.

2. Videbeck SL. Psychiatric mental health nursing. USA, Philadelphia: Lippincott Williams & Wilkins press; 2007; 242.

3. Timby BKa. Fundamental nursing skills and concepts. USA, Philadelphia : Lippincott Williams & Wilkins press; 2008; 941.

4. Cohen S, Kamarack, Mermeistein R. A global measure of perceived stress. Journal of Health and Social Behavior. 1983; 24 : 385-396

5. Lazarus RS, Folkman S. Stress, appraisal and coping. New York: Springer; 1984.

6. Bell ML. Learning a complex nursing skill: Student anxiety and the effect of preclinical skill evaluation. Journal of Nursing Education 1991; 30(5): 222-226.

7. Sadock BJ. Kaplan HI, Sadock VA. Kaplan & Sadock's synopsis of psychiatry: behavioral sciences/clinical psychiatry. USA, Philadelphia: Lippincott Williams & Wilkins Press; 2009; 815.

8. Randy JL, David MB. Stress, coping, adjustment, and health. Personality psychology. 3rd ed. McGraw-Hill. 2008, New York:561.

9. Lazarus RS. Coping Theory and Research: Past, Present, and Future. J. of Psychosomatic Medicine 1993; 55:234-247.

10. Baum A, Singer JE, Baum CS. Stress and the environment: J. of Social Issues 1981; 37:4-35.

11. Zegans LS. Stress and the development of somatic disorders. S. Handbook of stress: theoretical and clinical aspects. New York: Free Press; 1986; 134-51.

12. Cohen S, Kamarack T, Mermeistein, R. A global measure of perceived stress. Journal of Health and Social Behavior. 1983; 385-396.

13. Kaviani H, Pournaseh M, Sayadlou S, Mohammadi MR. Effectiveness Of stress management training in reducing anxiety and depression. New Journal of Cognitive Sciences 2007;8(2):61–8.

14. Evans W, Kelly B.Pre-registration diploma student nurse stress and coping measures. Nurse Education Today 2004;24(6):473-482.

15. Robin Walton LA. Comparison of Perceived Stress Levels and Coping Styles of Junior and Senior Students in Nursing and Social Work Programs. In Doctor of Education Dissertation College of Graduate Studies. Marshall University; 2002.

16. Timmins F and Kaliszer M. Aspects of nursing education programmes that frequently cause stress to nursing students-fact finding sample survey. Nurs Educ Today 2002; 203-211.

17. Lo RA. longitudinal study of perceived level of stress, coping and self-esteem of undergraduate nursing students. an Australian case study. J.Adv Nurs 2002;39:119-127.

18. Sheu S, Lin HS, Hwang SL. Perceived stress and physio-psycho-social status of nursing students during their initial period of clinical practice: the effect of coping behaviors. Int .J Nurs Study 2002; 39:165-175.

19. Sayed FN, Hagani H, Experienced stressors and coping strategies amoung Iranian Nursing students. Journal for nurses 2007; November13(1) : 11 - 6.

20. Kang YS, Choi SY, Ryu E. The effectiveness of a stress coping program based on mindfulness meditation on the stress, anxiety, and depression experienced by nursing students in Korea. Nurse Educ Today 2009;29(5):538–43.

21. Soltani M,Aminoroaya M, Atari A. Effect of stress management training on academic achievement and high school girls Tiran & karvan Isfahan City. Journal of Behavioral Sciences Research 2008;6(11):9–16.

22. Saih LO. A longitudinal study of perceived level of stress, coping and self esteem of undergraduate nursing students. an Australian case study. Journal of advanced nursing 2002; 39(2): 119-126.

23. Wong IK Hang. Stress among nursing students [internet]. [Cited at 2011 Nov 3]. Available from: http://www.ifeet.org/ stress_among_ the_ nursing_ students.html

24. Saxena Subodh. Organizational role stress among nursing students. The nursing journal of India 2001Dec; 92 (12): 269-270.

25. Betsy Stetson. Stress management for nursing students. Journal of holistic nursing Jun 1997; 52(2): 143-157.

26. Ana Lucia Siqueira Costa, Catarina Polak. Construction and validation of instrument for the assessment of stress among nursing students. Journal of Sao Paulo University School of nursing 2009 Sep; 43:1077-26. Available from: http://www.scielo.br/pdf/reeusp/v43nspe/en_a05v43ns.pdf

27. Naiemesh Seyedfatemi, Maryam Tafreshi, Hamid Hagani. Experienced stressors and coping strategies among Iranian nursing students. Biomed Central nursing 2007; vol 6: 11-14

28. Sundaram S. Stress and Coping between first year students and final year BSc(N) students. Nurses of India 2006 Dec;7(12):11-12.

29. Bittman BB, Synder C, Bruhn KT, Liebfried F, Stevens SK,Westengard J. et al, Recreational music-making: an integrative group intervention for reducing burnout and improving mood state in first year associate degree nursing students: insights and economic impact. Int. J. Nurs Educ Scholars. 2004 Jul;1(12).

30. Macini J, Clegg R. Graduate nursing students stress, Journal of nursing education 1983 October;22(8) : 329 - 34.

31. Davazdahemami MH, Roshan R, Mehrabi A, Atari A. Stress Management Training Effectiveness of cognitive - behavioral and depression on glycemic control in type 2 diabetic patients. Journal of Endocrinology and Metabolism 2009;11(4):385–92.

32. Charanjeev Singh, Sunita Sharma and Ravinder Kumar. Level of stress and coping strategies by nursing students. Nursing and Midwifery journal 2011 October; 7 : 14.

33. Ja KC, Hur HK, Kang DH, Kim BH. Effects of Psychosocial Stress Management on Stress and Coping in Student Nurses. Journal of Korean Academy of nursing 2004;33(3):440–5.

34. Mohsen Yazdani, Sara Rezaei, Saeid Pahlavanzadeh. The effectiveness of stress management training program on depression, anxiety and stress of the nursing students Iran J Nurse Midwifery Res 2010 Autumn; 15(4): 208–215.

35. Diane K, Leggett. Effectiveness of brief stress reduction intervention for nursing students in reducing physiological stress indicators and improving wellbeing and mental health [PhD thesis]. Utah Qld: University of Utah; 2011.

36. Luo Y, Wang H. Correlation research on psychological health impact on nursing students against stress, coping way and social support. Nurses education today 2008; 3.

37. Robin Walton L. Levels and Coping Styles of Junior and Senior Students in Nursin And Social Work Programs Dissertation submitted to the College of Graduate Studies. Marshall University, West Virginia:2002.

38. Samari AK, Lali Faz A, Askari AA. Review Sources of support and ways to deal with stressors in students. The Quarterly Journal of Fundamentals of Mental Health 2006;8(31, 32):97–107.

39. Tamina Toray. Coping in Women College Students: The Influence of Experience. Journal of College Student Development 1998.

40. Misra R, McKean M. College students' academic stress and its relation to their anxiety, time management, and leisure satisfaction. American Journal of Health Studies 2000; 16(1):41-51.

41 Kariv D, Heiman T. Task-oriented versus emotion-oriented coping strategies: The case of college students. College Student Journal 2005; 39(1):72-84.

42. Archer J Jr, Lamnin A. An investigation of personal and academic stressors on college campuses. Journal of College Student Personnel 1985; 26(3):210-215

43. Nicholl H, Timmins F. Programme-related stressors among part-time undergraduate nursing students. Journal of Advanced Nursing 2005; 50(1):93-100.

44. Mahat G. Stress and coping: junior baccalaureate nursing students in clinical settings. Nursing Forum 1998; 33(1):11-19

45 Sreevani R. All about your stress. Nightingale nursing time 2006 Jan; 1(10): 24-30.

46. Saih LO. A longitudinal study of perceived level of stress, coping and self esteem of undergraduate nursing students: An Australian case study. Journal of advanced nursing 2002 Apr; 39(2): 119-126.

47. Wong Hang IK. Stress among nursing students [internet]. [Cited at 2011 Nov 3]. Available from: http://www.ifeet.org/ stress_among_the_nursing_ students.html

48. Schiff W, Alters S. Essential Concepts for healthy living. 3rd ed. Canada: Jones and Bartlett publishers international; 2003.P 46 – 53.

49. Betsy Stetson. Stress management for nursing students. Journal of holistic nursing 1997 Jun; 52(2): 143-157.

50. Ana Lucia Siqueira Costa, Catarina Polak. Construction and validation of instrument for the assessment of stress among nursing students. Journal of Sao Paulo University School of nursing 2009 Sep; 43:1077-26. Available from: http://www.scielo.br/pdf/reeusp/v43nspe/en_a05v43ns.pdf

51. Pittis P. Research helps Nursing Students reduce stress levels. The University of Victoria community newspaper 2000; July 14.

52. Begum S, Rao KN. Psychiatric morbidity in college and illiterate youths. Indian journal of psychiatry 1994; 36 (3)

53. Kariv D, Heiman T. Task-oriented versus emotion-oriented coping strategies: The case of college students. College Student Journal 2005; 39(1):72-84.

54. Shields N. Stress, active coping, and academic performance among persisting and nonpersisting students. Journal of Applied Biobehavioral Research 2001; 6(2):65-81.

55. Ross SE, Niebling BC , Heckert TM.. Sources of stress among college students. College Student Journal 1999; 33(2): 312-318.

56 Shriver CB, Scott-Stiles A. Health habits of nursing versus nonnursing students: A longitudinal study. Journal of Nursing Education 2000; 39(7):308-314.

57. Fred T. Transcendental Meditation buffers students against college stress. International journal of psychophysiology 24-Feb-2009

58. Blake RL, Vandiver TA. The association of health with stressful life changes, social support and coping. FamPrac Res J 1988; 7: 205-218.

59. Randy JL, David MB. Stress, coping, adjustment and health. Personality Psychology. 3rd ed. New York:McGraw-HilL;2008.P.561

60. Folkman S, lazarus RS, Dunkel-schetier C, delongis A. et al. Dynamics of a stressful encounter: Cognitive appraisal, coping, and encounter outcomes. Journal of Personality and Social Psychology 1986; 50: 992-1003.

61. Farkhondeh Sharif, Sara Masoumi. A qualitative study of nursing student experiences of clinical practice accessed at Biomedical Central of Nursing. 2005; 4:6. available at http: //www.biomedcentral.com / logon/logon.asp?msg =ce

62. Frassrand S. A comparative analysis of stress levels in undergraduate university students, published thesis, University of Tennessee at chaltanooga, school of nursing 2005.

63. Jones M, Johnson D. The derivation of a brief student nurse stress index work & stress 13 (2) : 162-181.

64. Gibbons C, Dempster M, Moutroy M.Stress and eustress in nursing students. J AdvNurs 008;61(3):282-90.

65. Nicholl H, Timmins F. Programmed-related stressors among part-time undergraduate nursing students. Journal of Advanced Nursing 2005; 50 (1):93-100.

66. Misra R, McKean M, West S, Russo T. Academic stress of college students: Comparison of student and faculty perceptions. College Student Journal 2000; 34(2): 236-246

67. Patton T, Goldenberg D. Hardiness and anxiety as predictors of academic success in first-year, full-time and part-time RN students. The Journal of Continuing Education in Nursing 1999; 30(4): 158-164.

68. Seyed F, Tafreshi M. Experienced stressors and coping strategies among Iranian nursing Students. Bio Med Central 2007; 13 (11):1-10.

69. Supe AN. A study of stress in Medical students at Sheth GS Medical College. J Postgrad Med 1998; 44:1-6

70. Stewart SM, Beton C, Lan TH, Marshallk IB et al. Predicting stress in first year Medical students. a longitudinal study. Med Educ 1997; 31:163-8

71. Fish C, Nies MA. Health promotion needs of students in a college environment. Public Health Nurs 1996; 13:104-11

72. Chew-Graham CA, Rogers A, Yassin N. I would not want it on my CV or their records: Medical students' experiences of help-seeking for mental health problems. Med Educ 2003; 37:873-80

73. Lazarus RS, Folkman S. Stress, appraisal, and coping. New York: Springer; 1984.

74. Seward B. Managing stress: Principles and strategies for health and wellbeing 7th ed. 2012.

75. Melinda Smith MA, Robert Segas. Jones & Bartlett Learning.

76. Shapiro SS. Stress management in medical education: A review of the Literature on Academic Medicine 2000; 75 (7) : 748-759.

77. Hinkle LE.The concept of `stress' in the biological and social sciences. International Journal of Psychiatry in Medicine 1974;5: 335–357.

78. Plotnikoff NF, Boca Raton FL .Cytokines: Stress and immunity.CRC Press:1999

79. Selye H. The stress of life. New York NY: 1956; McGraw-Hill

80. Selye H. The stress concept: Past, present, and future. New York NY: John Wiley; 1983

81. Mason JW.A historical view of the stress field. Journal of Human Stress 1975;1: 6–12.

82. Parkes KR. Stressful episodes reported by first-year student nurses: a descriptive account, Occupational and Environmental Medicine, PGIMER, Chandigarh

83. Archer JA. Stress management: Evaluating a preventive approach for college students. Journal of American College Health 1986; 34: 157-160.

84. Xabier Zupiria Gorostidia, Xabier Huitzi Egilegorb, Mari Jose Alberdi Ericec, Mari Jose Uranga Iturriotzb, Inma Eizmendi Garated et al. Stress sources in nursing practice, evolution during nursing training. Nurse EducToday 2007 Oct;27(7):777-787.

85. Morge Hegge, Vicky Larson. Stressors and coping strategies of students in accelerated baccalaureate nursing programme. Journal of nurse educators 2008 Jun; 33(1):26-30

86. Fiona Timming, M. Kaliszer. Aspect of nurse education programme that frequently cause stress to nursing students-fact finding sample survey. Nurse education today 2002 April; 22(3):203-211.

87. Jones MC, Johnston DW. Distress, stress and coping in first year student nurses. Journal of advanced nursing. 1997 Sep; 26(3):475- 482.

88. Admi H, "Nursing student`s stress during the initial clinical experience", Journal of nursing education, 1997 September; 36(7) : 323 - 7.

89. Champan R, Orb A. Coping strategies in clinical practice. Journal of nursing Students 2001 September; 11(1) : 102 - 95.

90. Gibbons C, Dempster M, Moutray M. Stress and eustress in nursing students. Journal of Advanced Nursing 2008 ; 61(3): 282–290

91. Sarafino EP, Ewing M. The Hassles Assessment Scale for students in college: Measuring the frequency and unpleasantness of and dwelling on stressful events. Journal of American College Health 1999; 48(2): 75-83.

92. Lindop E. Individual stress among nurses in training: Why some leave and others stay. Nursing Education Today, 1990;11: 110-120.

93. Pagana KD. Stresses and threats reported by baccalaureate students in relation to an initial clinical experience. Journal of Nursing Education 1988 ; 27(9): 418-424.

94. Hudd SS, Dumlao J, Erdman-Sager, D, Murray D.et.al.. Stress at college: Effects on health habits, health status andself-esteem. College Student Journal 2000;34(2), 217-228.

95. van der Klink JJ, Blonk RW, ScheneAH, van Dijk FJ. The benefits of interventions for work-related stress.

96. Babak Moeini , Seyed Mohammad Mehdi Hazavehei, Zahra Hosseini, Teamur Aghamolaei et.alThe Impact of Cognitive-Behavioral Stress Management Training Program on Job Stress in Hospital Nurses: Applying PRECEDE Model Journal of Research in Health Sciences.

97. Jain S, Shapiro S, Swanick S, Roesch SC et al. A randomized controlled trial of mindfulness meditation versus relaxation training: effects on distress, positive states of mind, rumination and distraction. Ann Behav Med 2007 Feb; 33(1):11-21.

98. Tayebeh Mirzaei, Fatemeh Oskouie, orough Rafii, Tehran University of Medical Sciences.

99. Charlesworth EA, Murphy S, Beutler LE. Stress management skill for nursing students. Journal of Clinical Psychology 1981 Apr;37(2):284-90.

100. Mahat G.Stress and coping: First-year Nepalese nursing students in clinical settings. Nurs Educ 1996 Apr;35(4):163-9

101. Carver, CS, Scheier, M, Weintraub JK. Assessing coping strategies: A theoretically based approach. Journal of Personality and Social Psychology 1989;56(2): 267-283.

102. Jones M, Johnston D. Distress, stress and coping in first-year student nurses. Journal of Advanced Nursing 26(3), 475-482. Retrieved February 19, 2009, from Ebsco doi:10.1111/1365-2648.ep4514163.

103 Tayebeh Mirzaei. Nursing students time management, reducing stress and gaining satisfaction: a grounded theory study, Nursing and Health Sciences 2012; 14: 46–51.

104. Richman CL, Brodish J, Haas F, Billings C. Interventions for nursing practice problems . J Nurs Staff Dev. 1989 Jul-Aug;5(4):166-90.

105. Guptha Ramkumar. Effectiveness of yoga nidra on stress level among student nurses, Nurses of India 2007 Jul; 8(7): 9-10p

106. Ahmadnejad Z, Monjamed M. Pakravannejad A. Malekian, The Effect of Relaxation Training on First Year Nursing Students Anxiety in Clinical Setting. World Academy of Science, Engineering and Technology. 2011;59

107. Hamdan-Mansour AM, Puskar K, Bandak AG .Effectiveness of cognitive-behavioral therapy on depressive symptomatology, stress and coping strategies among Jordanian university students.

108. Patra Phuekphan A. "Stressors and Coping Strategies among AU nursing students" in the Silver Jubilee International Conference of Christian University of Thailand, Bangkok. during 19-21 2009 November; 19-21.

109. Hockemeyer J, Smyth J. Evaluating the feasibility and efficacy of a self-administered manual-based stress management intervention for individuals with asthma: Results from a controlled study. Behavioral Medicine 2002; 27(4): 161-172.

110. Palmer S, Dryden W. Stress management: Approaches and interventions. British Journal of Guidance & Counseling 1994;22(1): 5-13.

111. Fawcett J. Analysis and evaluation of contemporary nursing knowledge: Nursing models and theories 2000.

112. August-Brady M. Prevention as intervention: Journal of Advanced Nursing 2000; 3: 1304-1308.

113. Juminez PM, Navia – osoreio, Diaz CV "Stress and health in Novice and experienced nursing students" Journal of advance nursing 2010; 66: 442-455.

114. Hirokawa K, Yagi A, Miyata Y. An examination of the effects of stress management training for Japanese college students of social work. International Journal of Stress Management 2002; 92: 113-123

115. Macan TH. Time management: Test of a process model. Journal of Applied Psychology 1994; 79: 381-391.

116. Mary Lelia Baker. Nursing student stress and demographic factors. California State University, San Marcos. 2012.

APPENDIX A

LETTER SEEKING PERMISSION FOR DATA COLLECTION

From,

Mrs.R. Jancy Rachel Daisy, Msc(N),

C.S.I Jeyaraj Annapackiam College of Nursing,

Pasumalai, Madurai-4.

To

Respected Sir/Madam,

Sub: Seeking permission to do Ph. D data collection- reg.

I, Mrs.R. Jancy Rachel Daisy, Msc(N), doing Ph.D in Nursing at C.S.I Jeyaraj Annapackiam College of Nursing, Madurai, which is affiliated to The Tamil Nadu Dr. M.G.R Medical University, Chennai have undertaken the topic for thesis as "A study to assess the level of stress and coping behaviours and to evaluate the effectiveness of selected coping strategies among Student Nurses in selected institutions of Tamilnadu".

My study topic requires I year B.Sc(N) students as study samples. Therefore I, request your good self to grant me permission to collect data in your esteemed institution as per your convenience. Expecting your favourable reply.

Thanking you,

Yours Sincerely,

Mrs.R. Jancy Rachel Daisy, Msc(N),

APPENDIX B

LETTER SEEKING PERMISSION FOR CONTENT VALIDITY

From

Mrs.R. Jancy Rachel Daisy, Msc(N),
C.S.I Jeyaraj Annapackiam College of Nursing,
Pasumalai, Madurai-4.

To

Respected Madam /Sir,

Sub: Expert opinion for tool validity

I, Mrs.R. Jancy Rachel Daisy, Msc(N), doing Ph.D in Nursing at C.S.I Jeyaraj Annapackiam College of Nursing, Madurai, which is affiliated to The Tamil Nadu Dr. M.G.R Medical University, Chennai seek your expert validation on my study topic "A study to assess the level of stress and coping behaviours and to evaluate the effectiveness of selected coping strategies among Student Nurses in selected institutions of Tamilnadu".

I am herewith sending a copy of the tool along with the criteria check list prepared by me for its content validation.

Hence I request you to kindly examine the tool item wise and give your valuable opinion and suggestions for improvement of this tool. I would appreciate if this tool will be returned to me after verification with suggestions with in a week's time, so as to enable me proceed with my pilot study.

Please forward the tool and the signed content validity certificate to the address mentioned on the stamped cover sent along with this letter.

Thanking you in anticipation,

Yours sincerely,

Mrs.R. Jancy Rachel Daisy, Msc(N),

CONTENT VALIDITY CERTIFICATE

This is to certify that I ----------

----------have gone through the tool submitted by **Mrs.JANCY RACHEL DAISY, R,** Ph.D scholar doing her research under The Tamilnadu Dr. M.G.R Medical University, Chennai.

A study to assess the level of stress and coping behaviours and to evaluate the effectiveness of selected coping strategies among Student Nurses in selected institutions of Tamilnadu.

I have gone through the tool for construct, content and criterion validity. I certify that this tool can be used for above mentioned study.

Signature, Designation & Seal of the expert

APPENDIX C

LIST OF EXPERTS

SL.NO.	EXPERT NAME	WORKING PLACE	FIELD
1.	Dr. A.Charles	Research guide CSI JACON, Madurai	Professor in medical college
2.	Dr. Raj Kumar	Research guide CSI JACON, Madurai.	Community Medicine
3.	Dr. L. Eilean Victoria	Sri Ramachandra College of Nursing, Chennai.	Medical and Surgical Nursing.
4.	Dr. M. Kannan	Madurai Institute of Social Sciences.	Education
5.	Prof. Dr. A.Velmurugan	St, John's College of Nursing, Kattapana.	Medical and Surgical Nursing.
6.	Dr. Gokilavani	Principal, KMCH,Coimbatore	Medical and Surgical Nursing
7.	Dr. K. Rajalakshmi	Research Guide, CSI JACON, Madurai.	Pediatric nursing
8	Dr. Prasannababy	College of Nursing, Madurai Medical College.	Medical and Surgical Nursing
9	Dr. Karaline Karumagari	Rani Meyyammai College of Nursing, Chidambaram.	Medical Surgical Nursing.
10	Dr. Rawlin chinniah	Retd.professor,Govt Rajaji hospital, Madurai	Clinical psychologist
11	Dr. Jeyasingh	Professor cum Research Guide, CSI.JACON	Medicine
12	Mr. Mani Velsamy	Statistician at Aravind eye hospital	Bio-Statistician
13	Prof. Mrs. Shanthi Appavu	Christian College of Nursing, Neyyoor.	Medical Surgical Nursing.
14	Prof.Mrs. Jayathangaselvi	CSI JACON, Madurai	Medical Surgical Nursing
15	Prof. Shanthi	CSI JACON, Madurai	Obstretical and Gynaecological Nursing

APPENDIX D

INSTRUMENT

DEMOGRAPHIC PROFILE

1. Age:

2. Sex:
   a) Male.
   b) Female.

3. Religion:
   a) Hindu.
   b) Muslim.
   c) Christian.

4. Education of mother:
   a) Primary.
   b) Secondary.
   c) Higher secondary.
   d) Graduate.

5. Education of father:
   a) Primary.
   b) Secondary.
   c) Higher secondary.
   d) Graduate.

6. Occupation of mother:
   a) Housewife.
   b) Government.
   c) Private.
   d) Professional.
   e) Business.

7. Occupation of father:
   a) Coolie.
   b) Government.
   c) Private.
   d) Professional.
   e) Business.

8. Place of residence:
   a) Urban.
   b) Rural.

9. Order of sib-ship:
    a) First.
    b) Second.
    c) More than second.

10. Percentage of higher secondary marks:
    a) 51-60%
    b) 61-70%
    c) 71-80%
    d) 81-90%

11. Medium of language in schooling:
    a) Tamil.
    b) English.

12. Leisure time activities:
    a) Reading books.
    b) Watching TV.
    c) Listening to music.
    d) Drawing.
    e) Any other.

13. Type of Sociability
    a) Do not mingle with others.
    b) Mingle with selective people.
    c) Mingle with everyone.
    d) Sometimes mingle and other time may not mingle

14. Social activities:
    a) NSS
    b) SNA
    c) Any other.

STRESS SCALE

Read the items carefully and put a tick mark against each item on the column given on the right side

1- Seldom, 2- Rare, 3-Sometime, 4-Often, 5-Always

STRESSORS	1	2	3	4	5
ACADEMIC STRESSORS:					
1. Increased class workload and assignment.					
2. Scored lower marks than the expected mark.					
3. Strict rules and regulations of the college.					
4. Difficulty in understanding study material due to its complexity.					
5. Difficulty in completing procedures in time.					
6. Fear of failing to achieve my expectations					
7. Lack of clarity about clinical assignments.					
8. Difficulty in oral presentation.					
9. Difficulty in-group work assignment.					
10. Change in the medium of instruction.					
11. Lack of vacation					
12. Not able to write fluently					
TIME BALANCE STRESSORS:					
1. Not being able to review my studied portions					
2. Difficulty in completing all my daily responsibilities.					
3. Not finding time for both academic and leisure activities.					
4. Not able to prepare well for theory.					
5. Not able to perform well for practicals.					
6. Lack of time for self-care					

INTERPERSONAL STRESSORS:					
1. Difficulty to mingle with the new friend.					
2. Difficulty to study in a new atmosphere.					
3. Misunderstanding with Roommate.					
4. Difficulty to cope with new responsibilities.					
5. Withdrawal from friendship.					
6. Difficulty in finding support groups to my needs.					
7. Difficult to compete with other students.					
INTRAPERSONAL:					
1. Lack of motivation.					
2. Less interest in study.					
3. Thinking low of myself					
4. Thinking high of myself					
5. Not being able to think clearly.					
6. Laziness.					
7. Lack of self-discipline.					
8. Loneliness					
9. Headache.					
10. Insomnia.					
11. Tiredness.					
12. Heart palpitations					
13. Low self confidence.					
14. Difficulty in concentration.					
15. Forgetfulness					
FAMILY STRESSORS:					
1. Over Strictness of parents					

2. Being away from home for the first time.					
3. Not able to meet parents in need.					
4. Financial constraints.					
ENVIRONMENTAL STRESSORS:					
1. Given last priority in all aspects					
2. Difficulty in approaching teachers.					
3. Unfamiliar hostel environment.					
4. Uncomfortable classrooms					
5. Lack of telephone facilities					
6. Lack of recreational facilities.					

Read the items carefully and put a tick mark against each item on the column given on the right side

1- Never, 2-Seldom, 3-Sometime, 4-Often, 5-Always

COPING BEHAVIOURS	1	2	3	4	5
TIME MANAGE MENT:					
1. I have lack of clear-cut goals and priorities.					
2. I use a regular study habit.					
3. I Study harder subjects first.					
4. I don't try to get too much of comfort ness in study place.					
5. I wait for others to study.					
6. I pay attention to subjects.					
7. I Study continuously without intervals.					
8. I Study from simple to complex subjects.					
9. I am not aware of best time to study in a day.					
10. I Practice frequent review plan					
2.RELAXATION					
1.I fell ill often					
2.I improve my bodily resistance to disease					
3.I feel tired and exhausted					
4.I regulate my sleep patterns well					
5.I think low about myself					
6.I increase my strength and stamina					
7.I get disturbance in concentration					
8.I improve my ability to concentrate					
9.I don't sleep well during night time					
10. I enhance my self esteem and confidence					

3.POSITIVE THINKING					
1. I have been feeling optimistic about future					
2. I have been thinking about difficulties					
3. I find something good in what is happening					
4. I have been thinking negatively about future					
5. I have been feeling confident					
6. I have been focusing on benefits and not difficulties					
7. I have been feeling bad about myself					
8. I don't have confidence in doing things					
9. I have been feeling good about myself					
10. I perceive all events wrongly in day today happenings					
4 DECISION MAKING AND PROBLEM SOLVING:					
1. I find difficult in identification of the problem					
2. I find difficult to identify the possible solutions.					
3. I gather all datas in a timely manner.					
4. I identify all possible solutions.					
5. I prioritize all data's immediately.					
6. I try to implement one intervention after the other according to the priority.					
7. I select solutions without thinking undesirable consequence.					
8. I make a plan of action as per set goal.					
9. I don't wait to solve the problem by itself.					
10. I don t evaluate my decision at last					

5. VENTILATION:					
1. I don't maintain friendship.					
2. I Write the problem and destroy it immediately					
3. I Push all unpleasant things in to the unconscious mind.					
4. I cry to ventilate my emotions					
5. I blame others for my own mistake.					
6. I Ventilate feelings with close friends.					
7. I express anger by using bad words.					
8. I like to do some of my interesting works					
9. I Complain the problems to my superiors immediately before analyzing it					
10. I get spiritual support.					

APPENDIX E

INSTITUTIONAL ETHICAL COMMITTEE CLEARANCE

ETHICAL COMMITTEE MEMBERS	
1.Chairperson Prof.Dr.Charles.M.S.,M.Ch., Research guide, C.S.I.Jeyaraj Annapackiam CON, Madurai. **2.Co-chairpersion** Prof.Dr.K.Rajalakshmi.Ph.D.(N) Research coordinator, C.S.I.Jeyaraj Annapackiam C.O.N.Madurai. **3.Medical Scientist** Prof.Dr.V.N.Rajasekaran.Ph.D.,M.D. Medical Director,Meenakshi Mission Hospital, Madurai. **4.Philosopher** Prof.Dr.Gabriel .M.Ed.,M.Phil.,Ph.D. Director,C.S.I.School of Education. Madurai. **5.Member Secretary** Curriculum Development The T.N.M.University,Chennai	**6.Member Secretary** Prof.Dr.C.JothI shopia.Ph.D.(N). Principal , C.S.I.Jeyaraj Annapackiam. C.O.N.Madurai. **7.Member-Clinicians** Prof.Dr.Jeyasingh.MD.,DV.,Ph.D. Research guide, C.S.I.Jeyaraj Annapackiam C.O.N, Madurai. **8.Legal expert** Mr.Fernandez Rathinaraja.MA.,B.L. Legal Adcisor.DM&R.Madurai. **9. Social Scientist** Mr.R,Ravikumar.MA.,B.Ed.,M.Phil. Principal.Bethsan Special School. Madurai. **10.Community worker** Mrs.Gandhimathi.M.A. Community worker-Grade-III Thiruparankundrum. Madurai.

Minutes of the ethical committee meeting held on 16.11.2009 in C.S.I. Jeyaraj Annapackiam College of Nursing, Madurai. The research title**, "A study to assess the level of stress and coping behaviours and to evaluate the effectiveness of selected coping strategies among Student Nurses in selected institutions of Tamil Nadu"** was approved by the committee and **Prof.R. Jancy Rachel Daisy,** is permitted to do the Ph.D.(N) research under the Guidance of **Prof. Dr. A. CHARLES STEPHEN RAJA SINGH, M.S., M.ch.,** and Co-Guidance **Prof. Mrs. Helen Rani M.Sc., R.N. R.M, - Nursing Co Guide** for the research work is provisionally registered on 1.1.2009 for four years (January 2009 to December 2012) as a part time candidate for research leading to the award of Doctor of Philosophy in Nursing in the broad field of community nursing to the Tamil Nadu Dr. M.G.R. Medical University, Chennai.

Signature of the Chairperson

APPENDIX F

LESSON PLAN ON STRESS AND COPING STRATEGIES

Teacher name : Mrs. R.Jancy Rachel Daisy
subject : Mental health nursing
topic : stress and coping strategies
Group : I year B.Sc (N)
Duration : 7 hours
Method of teaching : Lecture cum discussion
A.V aids : power point and video presentation
Teaching learning activities: home work

CENTRAL OBJECTIVES:

At the end of the class, the students will be able to gain in-depth knowledge regarding stress and coping strategies, develop positive attitude and skill in facing and handling problems of day today life as well as to practice adaptive coping behaviours in order to lead a healthy and productive life.

SPECIFIC OBJECTIVES

At the end of the class, the students will be able to:

1. define "stress and stressors"
2. describe about general adaption syndrome.
3. Explain about problem and emotion focussed coping strategies
4. Enumerate the different techniques of time management.
5. List down the types of relaxation.
6. Describe the importance of positive thinking.
7. Explain the steps of problem solving and decision making with case scenario
8. describe the different methods of ventilation.

LESSON PLAN ON COPING STRATEGIES

TIME	OBJECTIVES	CONTENT	TEACHERS & LEARNERS ACTIVITY	EVALUATION
1 Hr.	Definition of stress and stressor	**STRESS AND COPING STRATEGIES** **1.AWARENESS OF STRESS AND COPING** **STRESS:** Stress is a relationship between person and the environment that is appraised by the person as exceeding or taxing the person's resources. **STRESSOR:** A biological, psychological, social or chemical factor that causes physical or emotional tension and may be a etiology of certain illness. **WHAT ARE THE CAUSES OF STRESS?** Dr. seyle called the causes of stress "stressors" or "triggers". There are two kinds of stressors: ❖ External. ❖ Internal **EXTERNAL STRESSORS INCLUDE:** ➢ Physical environment: noise, bright lights, heat ➢ confined spaces. ➢ Social (interaction with people): rudeness, bossiness or aggressiveness on the part of someone else. ➢ Organizational: rules, regulations, "red tape," deadlines. ➢ Major life events: death of a relative, lost job, new baby.	Explaining the definition and causes of stress	What are the stress of your day today activities

		➢ Daily hassles: commuting, misplacing keys, mechanical breakdowns. **INTERNAL STRESSORS INCLUDE:** ➢ Lifestyle choices: caffeine, not enough sleep, overloaded schedule. ➢ Negative self-talk: pessimistic thinking, self criticism, over-analyzing. ➢ Mind traps: unrealistic expectations, taking things personally, all-or-nothing thinking, and exaggerating, rigid thinking. ➢ Stressful personal traits: type A, perfectionist, workaholic, and pleaser. It is important to note that most of the stress that most of us have is actually self-generated. This is a paradox because so many people think of external stressors when they are upset (it is the weather, the boss, the children, the spouse, the stock market). Recognizing that we create most of our own upsets, however, is an important first step to dealing with them. Stress is initiated not by a single stressor but by an unfavorable person-environment relationship that is meaningful in terms of risks or benefits to that person's wellbeing. The person's commitment to the goal influences the stress response as well as the meaning of the situation. More committed the person is to a specific goal, greater is his or her vulnerability to stress. The meaning of person-environment situation is evaluated or for its risks and benefits. Cognitive appraisal is the process of examining the demands, constraints and resources of the environment and negotiating them with personal goals and beliefs. During the appraisal process, the person integrates his or her personality and environmental factors into a rational meaning based on the relevance of what is happening to the person's of wellbeing.		

		INTERNAL STRESSORS INCLUDE *LIFESTYLE CHOICES:* caffeine, not enough sleep, overloaded schedule NEGATIVE SELF-TALK: pessimistic thinking, self criticism, over- analyzing *MIND TRAPS:* Unrealistic expectations, taking things personally, all-or-nothing thinking, exaggerating, rigid thinking. ***STRESSFUL PERSONAL TRAITS*:** Type A, perfectionist, workaholic, pleaser. It is important to note that most of the stress that most of us have is actually self-generated. Recognizing that we create most of our own upsets, however, is an important first step to dealing with them Susan was less stressed than Joanne was. Susan was tested, had studied and was interested in the content. Whereas Joanne was, sleep deprived and inadequately prepared. The critical factor is the risk involved. For Susan, a failed test meant a retake, Joanne failed test meant not returning to school. EXAMPLE Susan was less stressed than Joanne was. Susan was tested, had studied and was interested in the content. Whereas Joanne was, sleep deprived and inadequately prepared. The critical factor is the risk involved. For Susan, a failed test meant a retake, Joanne failed test meant		

	To make the student to understand the appraisal with an example	not returning to school. LEVELS OF APPRAISAL • PRIMARY APPRAISAL • SECONDARY APPRAISAL **PRIMARY APPRAISAL :** In the above stated example, Susan's commitment to the goal of doing well on the test is consistent with her "valuing the content, which in turn motivated to her study regularly and prepare carefully for the exams. She believed the test would be difficult." Joanne had the commitment to pass the test but did "not value the content. However, Joanne believed that the test would be relatively easy". **SECONDARY APPRAISAL** The second level secondary appraisal involves making decision about blame or credit coping potential and future expectation." In this example, • Susan nervous but took test. • Joanne's secondary appraisal of test taking situation begun with the realization. She might not pass the test because the questions were different. She acted impulsively by blaming the teacher for giving the different examination and storming out of the room. She did not cope effectively with the situation.	Discussion with the students about primary and secondary appraisal	What is the difference between primary and secondary appraisal

1 Hr	Describing about General Adaptation Syndrom	**GENERAL ADAPTATION SYNDROME:** seyle called the general reaction of the body to stress as the general adaptation syndrome. **ALARM REACTION STAGE** !!! During this stage, the physiological responses of the "fight or flight syndrome" are initiated. **STAGES OF RESISTANCE** The individual uses the physiological responses of the first stage as a defense in the attempt to adapt to the stressor. If adaptation occurs, the third stage is prevented or delayed. Physiological symptoms may disappear. !! **STAGES OF EXHAUSTION** This stage occurs when there is a prolonged exposure to stressor to which the body has been adjusted the adaptive energy is depleted and the individual can no longer draw from the resources for adaptation.	Showing diagrammatic representation of general adaptation syndrome	What are the stages of general adaptation syndrome
	Explanation on the types of coping	**COPING :** Coping" is a process whereby a person manages the demands and emotions that are generated by the appraisal. **PROBLEM FOCUSED COPING** In problem focused coping, the person attacks the source of stress		What is the difference between problem and emotion focussed coping?

		by eliminating it or changing its effects. Eg: when noise from television interrupts a student from studying and causes the student to be stressed, the student turns off the television and eliminates the noise. **EMOTION FOCUSED COPING:** The person reinterprets the situation reducing the stress and the need for further coping without changing the actual personal environment relationship. Eg : a mother is afraid that her teen aged daughter has been in an accident because she didn't come home after a party. Then the woman remembers that he gave her daughter permission to stay at a friend's house. She immediately feels better. **The Four A's to deal with stressful situation:** Change the situation: • Avoid the stressor. • Alter the stressor. Change your reaction: • Adapt to the stressor. • Accept the stressor		
	Explaining about the different methods to deal with a stressful situation	**AVOID UNNECESSARY STRESS** Pare down your to-do list – Analyze your schedule, responsibilities, and daily tasks. If you've got too much on your plate, distinguish between the "shoulds" and the "musts." Drop tasks that aren't truly necessary to the bottom of the list or eliminate them entirely.		Can you tell the ways in your day to day activities of dealing with stressful situation ?

	Explaining the model of controlling negative self talk	**ALTER THE SITUATION** Problem solving and decision making If something or someone is bothering you, communicate your concerns in an open and respectful way. Try to solve the problems by taking right decisions. **AWARENESS** The first step in the stress management is to increase the client's awareness of the events, interpretations and self talk that trigger a stress response, along with awareness of individual response patterns, Control of self talk. The model is an easy to use as A, B, C. A=Activating event (what happened). An occurrence which triggers an emotional consequences. Eg: My bus came late and I am unable to reach my work place in time. B=Belief (what you are thinking, self talk) An evaluation and judgment about the demands on yourself, demands about others and demands about the world or life conditions. These may be rational and realistic or irrational. Eg: People who look down on me for being late they will that I am stupid and unreliable. C=Consequence (outcome). An emotional and/or physical consequence taken to a belief. Example : anxiety. **EXERCISE** Step1: Think of an activating event.Speaking in front of the audience Step2: Identify your feelings and reactions.Felt fearful. Mouth gets dry	Homework for the students	

1 Hr.	Explanation about the ways of controlling negative self talk	hands become clammy. Step3: Identify beliefs that lead to negative outcomes I am incapable of doing the job Step4: Write down the same event. I felt fearful in speaking in front of the audience Step5: How would you like to feel and behave the next time the same situation arises? I prepared well and I will do a good job. I have the skill **POSITIVE THINKING** • Positive thinking helps with stress management and can even improve your health. Overcome negative self-talk by recognizing it and practicing with some examples provided • Positive thinking enhances focus on your job and can help to reduce the chance of accidents **UNDERSTANDING POSITIVE THINKING AND SELF-TALK** Self-talk is the endless stream of thoughts that run through your head every day. These automatic thoughts can be positive or negative. Some of your self-talk comes from logic and reason. Other self-talk may arise from misconceptions that you create because of lack of information **HOW POSITIVE THINKING GIVES WAY TO NEGATIVE THINKING** • But what if your self-talk is mainly negative? That doesn't mean you're doomed to an unhappy life. Negative self-talk just means that your own misperceptions, lack of information and distorted ideas have overpowered your capacity for logic and reason.	Listing different positive quotes on positive thinking by showing video clipping	Can you write some of the positive quotes about yourself

		SOME COMMON FORMS OF NEGATIVE AND IRRATIONAL SELF-TALK INCLUDES: • Personalizing. When something bad occurs, you automatically blame yourself. • Catastrophizing. You automatically anticipate the worst. • Polarizing. You see things only as either good or bad, black or white. • Filtering. You magnify the negative aspects of a situation and filter out all of the positive ones Instead of giving in to these kinds of negative self-talk, weed out misconceptions and irrational thinking and then challenge them with rational, positive thoughts. When you do this, your self-talk will gradually become realistic and self-affirming — you engage in positive thinking. • Periodically during the day, stop and evaluate what you're thinking. If you find that your thoughts are mainly negative, try to find a way to put a positive spin on them. • Don't say anything to yourself that you wouldn't say to anyone else REMEMBER • You owe it to yourself to react positively! • You owe it to yourself to work safely! • You owe it to yourself and your loved ones to avoid injuries!		
	Describing the value of time and planning of time daily	**TIME MANAGEMENT:** One of the most common cause of stress is being disorganized at studies or at the living environment. Nothing is particularly hard if you divide it into small jobs.	Describing about the study management techniques by	

		What are the time wasters for you? • Interruptions such as telephone calls, drop in visitors. • Lack of clear cut goals, objectives, priorities • Lack of personal organization and self discipline • Waiting for others **DO YOU KNOW WHEN TO STUDY** **TIME MANAGEMENT TECHNIQUES FOR STUDENTS** Study when: o Plan two study hours for every hour you spend in the class. o Study difficult or boring subjects first. o Avoid scheduling marathon sessions. o Be aware of best time of the day. o Use a regular study area Do you know where to study Study where: • Choose a place that minimizes visual and auditory distractions. • Use library or empty classrooms get out of as noisy room. • Do not get too comfortable. Sit (or even stand) so that you can remain awake and attentive. **DO YOU KNOW HOW TO STUDY** You and the outside world: • Pay attention to your attention. • Agree with roommates about study time. • Avoid noisy distractions. • Notice how others misuse your time. • Get off the phone.	showing through videos	

1 Hr	Defining problem solving and decision making	• Learn to say “no”. • Hanging a “do not disturb” on your door. • Ask, “how did I waste time. **POINTS TO BE KEPT IN MIND BEFORE TIME PLANNING** 1.Blocks of the study times and breaks 2.Dedicated study spaces 3. Weekly review 4 Prioritize your assignments 5.Achieve stage one-get something done **PROBLEM SOLVING AND DECISION MAKING** Problem solving and decision making is vital abilities for nursing practice. It is a process, which not only involves managing and delivering effective care but also is also essential for engaging in planned change. Problem solving is a systematic process that focuses on analyzing a difficult. It is the process of taking coercive action in order to meet objectives. It is also a part of decision-making **DECISION MAKING** Decision-making is a purposeful and goal directed effort using a systematic process to choose among options. The hallmark of decision-making is the identification and selection of options. **PROCESS OF PROBLEM SOLVING IN NURSING DEFINE THE PROBLEM** Problem identification is influenced by information available, by the values, attitudes and experience of the decision makers, and by the time factor. Sufficient time should be allowed for collection and	Discussion about the ways of solving the problems with an example	

		organization of data **GATHER DATA** The data gathered consist of objectives (facts) and subjective (feeling) information. Information gathered should be valid, accurate relevant to the issue and timely. Moreover, individuals involved in this process must have access to information and adequate resources in order to make cogent decisions **ANALYZE THE DATA** Further refine the problem statement and identify possible solutions or options **DEVELOP ALTERNATIVES** The goal of generating option is to identify as many choices as possible being flexible, open minded and creative to being able to consider a range of possible options. **SELECT SOLUTIONS** The decision maker should the objectively weigh each option according to its possible risks and consequences as well as possible outcomes they may be derived. The solution selected should be the one that is more feasible and satisfactory and has the least undesirable consequences. **IMPLEMENT THE DECISIONS** The implementation phase should include a contingency plan to deal with negative consequences should they appear		

		METHODS OF PROBLEM SOLVING **TRIAL AND ERROR:** Trying one intervention after the other until the method seems to address the problem. **PURPOSEFUL ACTION:** Do nothing and wait to solve the problem automatically **NURSING APPLICATION OF PROBLEM SOLVING AND DECISION MAKING PROCESS** Case example: Mrs. Thomas has recently been promoted as the head nurse of a medical oncology ward. She is a graduate nurse with six year of experience as a staff nurse in the same unit. She worked very well with competency in clinical skills. She got support of all co-workers when her name was suggested for promotion. When Mrs. Thomas was offered the promotion, she became anxious as she did not have any managerial experience but she was assured that there would be amble opportunity for her to attend management seminars and workshops and grow into a role of a nurse manager When Mrs. Thomas started a new role, she had no major crises for initial two weeks but she learnt that she had to work a little longer than the other staff. But after a few weeks, she frequently encountered with events were her staff were leaving early because of some reasonable emergency. In these cases, rather than reassigning the patients of concerning other staff, Mrs. Thomas took over the caseload and checked the due medications and nursing care. Because of these incidents during that week, she spent 12 hrs extra to finish her additional responsibilities.		

		On one occasion as, ANS was taking routine round, Mrs. Thomas found that a new staff has initiated the chemotherapy infusion at wrong rate and she was unable to found the error as she was busy with other patients(because of staff-shortage)ANS asked Mrs. Thomas, "we're paying you to manage all staff and patients and not just to function like a staff nurse. I know that you have been in a new job for a few weeks and I hope you can show more managerial expertise and not just the technical nursing skills. If you were managing the unit you could have picked up that staff who started the wrong infusion rate. Mrs. Thomas was too tired to respond adequately to ANS but along way to her home, she was thinking that what she did wrong. She was working extra time, was taking work to her home so that she could fulfill the expectations of new job, but these conditions started making her dissatisfied and demoralized. She started feeling very tired and mentally exhausted and could not give routine attention to her family and personal life. **APPLICATION OF PROBLEM SOLVING PROCESS IN MRS. THOMAS PROBLEM** **HOW WILL YOU DEFINE THE PROBLEM** Mrs. Thomas, the novice head nurse was finding it difficult to manage her time with additional responsibilities. **WHAT ARE THE MEANS BY WHICH DATA CAN BE GATHERED?** Gather data to analyze the causes and consequences of the problem: In the beginning, Mrs. Thomas ignored the problem try to fulfill the		

		additional responsibilities at the cost of extra efforts and time. She worked hard initially for a few weeks as head nurse but failed to perform up to the level, she wanted to perform. These problem-associated factors were: Magnitude of the problem : While working on the problem, Mrs. Thomas found that instead of, getting solved the problem, remain somewhat constant in relation to the time management. The problem resulted in ▪ Paying 12 hrs/week extra time in order to fulfill her additional responsibilities. ▪ Working for late hours in ward and taking remaining work at home. ▪ Started cutting short as sleep and feeling drowsy during work. ▪ Found herself sometimes irritating and stressful at home and began to feel dissatisfied with the new post for which she was thinking previously exciting. ▪ Questioned by seniors about her commitment and ability for new post. **POSSIBLE AREAS CONTRIBUTING TO THE PROBLEM:** Problem was identified as inability to manage time with additional responsibilities as a head nurse, and possible causes were: ➢ Probably attitude of the perfectionist. ➢ Lack of experience to tackle the situation without doing extra efforts. ➢ Extra clinical work of other staff. ➢ Lack of delegation. Unable to get help from others to complete certain jobs.		

		ANALYZE DATA: Following issues were considered: ➢ If Mrs. Thomas continues to work extra time, she will soon get demoralized and burned out. If Mrs. Thomas has to take work home, her family and personal work will be affected contributing to increased dissatisfaction. ➢ If she wont be able to fulfill her new managerial responsibilities, her ability will be questioned by herself and her superiors. ➢ If she encounters this situation frequently, she might think what the benefit of a promotion is and it will be very de-motivating for her. **WHAT ARE THE POSSIBLE ALTERNATIVES IN MRS. THOMAS PROBLEM?** ➢ Work only whatever can be completed within the duty time. ➢ Resign from the new post. ➢ Ask the help to complete her new managerial responsibilities and ask for additional staff so she can complete her rounds. ➢ Taking some action herself or complaining to higher authorities against the staff, frequently leaving early. ➢ Delegate the responsibilities. Attending in service education on managerial skills and practicing the skills. **WILL YOU ABLE TO TELL THE SOLUTION IN MRS. THOMAS PROBLEM** • Work only whatever can be completed within the duty time • Delegate the responsiblities • Attending inservice education on managerial skills and practicing		

1 Hr		the skills. **RELAXATION** • Relaxation lowers blood pressure, respiration, and pulse rates, releases muscle tension, and eases emotional strains. This response is highly individualized, but there are certain approaches that seem to work. • A person who remains excited during daily activities will not readily relax, so tension will build up over time. Learning to relax in stressful situations can also improve your performance and increase your confidence.You should learn to relax when active as well as when lying down. In order to learn more about relaxing while being active, you need to learn to distinguish between primary and secondary activity • PRIMARY ACTIVITY is essential to a task. In the example, the primary activities are the muscles that contract to hold the pen and the hand that steadies the paper • SECONDARY ACTIVITIES are the extra activities; they are not necessary. • We tend to do them to dispel excess tension, but they also create tension in themselves. They do not help you do the job any better, will use up your energy, and cause you unnecessary tension. In this case, your hunched back and crossed legs are good examples.	What are the benefits of relexation.	How will you relax yourself daily

		MAKE TIME FOR FUN AND RELAXATION • Go for a walk. • Spend time in nature. • Call a good friend. • Sweat out tension with a good workout. • Write in your journal. • Take a long bath. • Light scented candles. • Savour a warm cup of coffee or tea. • Play with a pet. • Work in your garden. • Get a massage. • Curl up with a good book. • Listen to music. • Watch a comedy **DEEP BREATHING EXERCISES** • Inhale through the nose slowly and deeply to the count of 10. • Make sure that the stomach and abdomen expand, but the chest does not rise. • Exhale through the nose, slowly and completely, also to the count of 10 • To help quiet the mind, concentrate fully on breathing and counting through each cycle. • Repeat five to 10 times, and make a habit of doing the exercise several times each day, even when not feeling strength		

1 Hr	Explaining about the different types of Ventilation	**VENTILATION** A life factor fosters high performance and personal life satisfaction is building and maintaining strong support system. Lack of an adequate system contributes to the intensity of the stress response. Social support can be defined as interactions that can lead an individual to feel loved, esteemed and a member of network of individuals working for the same end. A social support system does not have limited to people, an animal can make an individual feel loved and secured. A social support helps increase resistance and protects people from becoming ill in a wide variety of situations. There is an old saying that, “a problem shared is a problem halved. People who keep things to themselves carry a considerable and unnecessary burden. We will do much for ourselves by allowing us to ventilate our feeling to others. We can also help ourselves by developing a support system (a few friends to talk when we are upset and worried) Another form of ventilation find helpful in writing. You can write a letter to the person at whom you are vexed. These letters are not for sending, they should be destroyed once they are written-unread. The value is expressing feeling and getting them out. Rereading the letter reinforces the upset and fans the flames of anger all over again. If these mechanisms are found to be not useful, getting professional help is good.		

1 Hr	Summarising the topic	**SUMMARY** So far we have seen the different types of adaptive coping to cope up in day today activities involving time management positive thinking, relaxation, problem solving and decision making, ventilation		

APPENDIX G

EXERCISE ON POSITIVE THINKING

I. Write the ways of eliminating negative self talk by applying the model

Step1: Think of an activating event.

Step2: Identify your feelings and reactions.

Step3: Identify beliefs that lead to negative outcomes.

Step4: Write down the same event.

Step5: How would you like to feel and behave the next time the same situation arises?

II. You write 3 positive affirmations for yourself. Remember – personal, Positive and present tense!

1. _____
_____
2. _____
_____
3. _____

KEY ANSWERS

I

1.Speaking in front of the audience

2.Felt fearful. Mouth gets dry hands become clammy.

3.I am incapable of doing the job

4.I felt fearful in speaking in front of the audience

5.I prepared well and I will do a good job. I have the skill

II.

1. I am healthy.

2. I work well with many different kinds of people.

3. I have friends who love me.

4. I try hard.

5. I am a loving son, daughter

EXERCISE ON TIME MANAGEMENT

1. Calculate the number of hours you spend on college/studying (lectures, labs, independent work).

2. Calculate the number of hours you spend socialising (including coffee breaks).

3. Calculate the number of hours you spend exercising.

4. Calculate the number of hours you spend doing paid work.

Now go back and calculate the same items, this time using the number of Hours you would ideally like to spend on each item.

If you think there is an imbalance between what is ideal for a balanced life Style and what you actually do, consider the following questions.

What needs to change in your lifestyle?

What might be the difficulties in changing?

What help might you need to make changes?

EXERCISE II

- What are the time wasters for you?

Key Answers:

- Interruptions such as telephone calls,drop in visitors.
- Lack of clear cut goals,objectives,priorities
- Lack of personal organisation and self discipline
- Waiting for others

ASSIGNMENT ON RELAXATION

Deep Breathing Exercises

- Inhale through the nose slowly and deeply to the count of 10.
- Make sure that the stomach and abdomen expand, but the chest does not rise.
- Exhale through the nose, slowly and completely, also to the count of 10.
- To help quiet the mind, concentrate fully on breathing and counting through each cycle.
- Repeat five to 10 times, and make a habit of doing the exercise several times each day, even when not feeling stressed

Short Relaxation

- This exercise is very useful when you don't have much time available or are somewhere you cannot lie down (e.g. library, waiting for an interview, etc.).
- Make sure you are sitting comfortably. It works better if you close your eyes.
- Sit upright and rest your hands on your thighs. Let your feet rest on the floor.
- Gently breathe out. Slowly breathe in, and gently breathe out again. Do this slowly several times, starting to let the tension ease. Continue gentle breathing.
- Now focus on your body parts. First your feet – tense all the muscles in your feet, curling your toes. Now let your toes, feet and ankles relax.
- Feel the tension draining away into the floor.
- Next your legs – tense all the muscles in your legs, pressing your legs against the chair. Then relax, letting your legs loose, allowing the tension to drain down your legs, through your feet and into the floor.
- Now your back and your spine. Tense your shoulders and back muscles.
- Press into the chair. Relax, letting the tension drain slowly down your spine, down your legs, into your feet and into the floor.
- Remember to continue gently breathing. You are slowly getting more and more relaxed. Let your stomach muscles relax as you breathe.
- Focus on your hands and arms. Tense all the muscles, curling your hands and fingers in your lap. Now slowly let the tension drain down your arms, through your hands into your thighs, down your legs, down your feet and into the floor.
- Finally the neck and head. Tighten your facial muscles; locate the tension in your neck. Relax now and allow the tension to drain down your back, down your legs, into your feet and into the floor.
- Check to see if your muscles are relaxed. Your breathing is still gentle and even. Enjoy the feeling of relaxation for a few moments.
- When ready, gently shake your body and open your eyes

APPENDIX H

CRITERIA CHECK LIST

Please give your opinion for the tool constructed by the investigator. Please give your valuable opinion.

PART-I DEMOGRAPHIC VARIABLES

Item No:	Appropriate (Yes / No)	Not Appropriate	Need Modification	Suggestion	Remarks
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					

Any other suggestion:

PART-II

RATING SCALE TO ASSESS STRESS AND COPING BEHAVIOURS

Item No:	Appropriate	Not Appropriate	Need Modification	Suggestion	Remarks
I. Academic Stressors					
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
II. Time Balance Stressors					
1.					
2.					
3.					
4.					
5.					
6.					
III. Intrapersonal					
1.					
2.					
3.					
4.					
5.					
6.					
7.					

IV. Interpersonal Stressors					
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
V. Family Stressors					
1.					
2.					
3.					
4.					
VI. Environmental Stressors					
1.					
2.					
3.					
4.					
5.					
6.					

Any other suggestion:

PART III RATING SCALE ON COPING BEHAVIOURS

Item No:	Appropriate	Not Appropriate	Need Modification	Suggestion	Remarks
I. TIME MANAGEMENT					
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
II. POSITIVE THINKING					
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
III. RELAXATION					
1.					
2.					
3.					
4.					
5.					

6.					
7.					
8.					
9.					
10.					
IV. PROBLEM SOLVING AND DECISION MAKING					
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
V. VENTILATION					
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					

.

Any other suggestion:

APPENDIX I
TIME SCALE FOR EVENTS OF RESEARCH
FROM JAN 2009 TO DEC 2012

TASK	CALENDER MONTHS OF RESEARCH MILESTONE EVENTS							
	2009		2010		2011		2012	
	JAN-JUNE'09	JULY-DEC'09	JAN-JUNE'010	JULY-DEC'010	JAN-JUNE'011	JULY-DEC'011	JAN-JUNE'012	JULY-DEC'012
1. Literature review								
2. Research proposal and provisional registration								
3. Seminar attended and presentation								
4. Methodology Exam								
5. Research tool(s) selection and draft preparation								
6. Validity and reliability of tools								
7. pilot study permission & conduct ion								
8. Main study Permission and Data collection								
9. Draft writing for all chapters								
10. Coding ,data for analysis and compiling results								
11. Preparation and Submission of Synopsis								
12. Final draft Preparation and Thesis submission								